Service Manual

Commercial Air Conditioning

Home MRV

AU482FIAIA
AU48NFIAIA

Features

- AC Inverter
- Auto-restart function
- Auto-changeover
- The Outdoor unit can match with max. 8 indoor unit
- Electronic expansion valve out to MP3(MP2),more silence
- Healthy negative ion generation function(optional)

Haier Group

MANUAL CODE: SYJS-019-03 rev.1 2003.6

CONTENTS

Contents…….....1
1. Description of Products & Features…....……..…….3
2. Specifications…… ……..……7
3. Safety precaution……..……14
4. Net dimensions of indoor and outdoor unit…….....……...16
5. Installation instructions ……..…. ……..21
6. Parts and functions ……..…… ..……..55
7. Remote controller functions…….....59
8. Refrigerant diagram…….....66
9. Electrical control functions…….....67
10. Diagnostic information(trouble shooting)…….....76
11. Electrical data.....82
12. Exploded views and parts lists..... ……..97
13. Perdormance curves……..... ……..87
14. Noise level charts..... ……..93
15. Air velocity distribution ……..... ……..94

1 DESCRIPTION OF PRODUCTS & FEATURES

1. Nomenclature

l Indoor unit:

Model of indoor unit

A	S	09	2	F	M	A	H	A
1	2	34	5	6	7	8	9	10

1 Product symbol (A stands for air conditioner)
2 Product mode (S stands for split type air conditioner)
3 , 4 Product specification (09 stands for cooling/heating capacity is 9000BTU/h)
5 Applicable voltage (2 stands for 220-240V/50Hz)
6 Product series (F stands for free combination)
7 Appearance character (M stands for 28 large arc normal air inlet grille 1232084 back frame)
8 Product type (A stands for heat pump type, refrigerant is R22)
9 Design number (H stands for inverter heat pump air conditioner)
10 Climate type (A stands for T1 climate)

Model of indoor unit

A	P	18	2	F	A	A	H	A
1	2	3 4	5	6	7	8	9	10

1 Product symbol (A stands for air conditioner)
2 Product mode (P stands for packaged type air conditioner)
3 , 4 Product specification (18 stands for cooling/heating capacity is 18,000BTU)
5 Applicable voltage (2 stands for 220-240V/50Hz)
6 Product series (F stands for free combination)
7 Appearance character (A stands for appearance of inverter packaged type air conditioner)
8 Product type (A stands for heat pump type, refrigerant is R22)
9 Design number (H stands for inverter heat pump air conditioner)
10 Climate type (A stands for T1 climate)

- Outdoor unit:

Model of outdoor unit

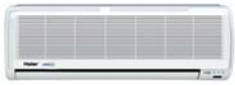
A	U	48	2	F	I	A	I	A
1	2	3 4	5	6	7	8	9	10

1 Product symbol (A stands for air conditioner)
2 Product mode (U stands for split type air conditioner outdoor unit)
3 , 4 Product specification (48 stands for cooling/heating capacity is 48,000BTU)
5 Applicable voltage (2 stands for 220-240V/50Hz, N stands for 380~400V/Hz)
6 Product series (F stands for free combination)
7 Appearance character (I stands for 5HP outdoor unit)
8 Product type (A stands for heat pump type, refrigerant is R22)
9 Design number
10 Climate type (A stands for T1 climate)

outdoor units

appearance	model	refrigerant	capacity(BTU/h)		connect capacity(HP)		Max. indoor units can be connected
			cooling	heating	Min.	Max.	
	AU482FIAIA	R22	48000	56000	2.5	6.5	8
	AU48NFIAIA	R22	48000	56000	2.5	6.5	

indoor units

type	appearance	model	refrigerant	capacity(BTU/h)	
				cooling	heating
Four way cassette		AB092FCAHA	R22	10000	12000
		AB142FCAHA	R22	14000	17000
		AB182FCAHA	R22	18000	21000
Convertible		AC182FCAHA	R22	18000	21000
Ceiling concealed		AE072FCAKA	R22	7000	9000
		AE242FCAKA	R22	24000	28000
		AE092FCAKA	R22	9000	11000
		AE122FCAKA	R22	12000	14000
		AE142FCAKA	R22	14000	16000
		AE182FCAKA	R22	18000	21000
		AE212FCAKA	R22	21000	24000
Cabinet		AP182FAAHA	R22	18000	21000
Wall-mounted		AS062FMAHA	R22	6000	8000
		AS072FMAHA	R22	7000	9000
		AS092FMAHA	R22	10000	13000
		AS122FMAHA	R22	12000	14000
		AS182FTAHA	R22	18000	21000

4. Character of Products

1) The length of horizontal refrigerant pipe can reach 70m,the total pipe length can reach 100m, the height difference between indoors unit and outdoor unit can reach 30m, the height difference between indoor units can reach 10m.
2) 1000m super far distance communication between indoor and outdoor units, convenient control and easy to enlarge the scale of units assembly.
3) Indoor unit can be controlled separately.
4) Equipped with computer-checking interface, conveniently for service work.
5) Far distance sending of refrigerant, and distribute refrigerant intelligently and reasonably according to the needs of each room, high efficient and energy saving.
6) Display of automatic test of trouble.
7) Healthy negative ion generation function can refresh the air and excite the oxygen,it is optional.
8) **The ceiling concealed models move the indoor electronic expansion valve out to MP3 (electronic expansion valve box), completely avoid the flow sound of EEV, extremely lower noise, and realize super-silence running in deed.**
9) **The ceiling concealed models (except AE07\AE24) all have return air box, it will be set back return air when out of factory. When installation, bottom plate 2 can be removed and installed on the back, consequently, return air mode has been transferred to down return air.**
10) **In order to remain the best running state of indoor unit, control the refrigerant flow by MP3 (MP2), so as to realize energy saving for every unit and the most comfortable operation.**
11) The units except for convertible model are all wired controller and remote controller models.If you want a wired control unit or a remote control unit, please inform us ahead of schedule.

    The unit with remote controller is matched with receive display.

    The unit with wired controller equipped with wired controller, can make remote operation on wired controller with remote controller such as YR-H39, but the remote controller is additionally purchased.

SPECIFICATIONS

Item				model	AU482FIAIA	
Function					Cooling	Heating
Capacity				BTU/h	48000	56000
Total power input				W	6000	6000
Max. power input				W	7200	7000
Dehumidifying capacity				10 - ³×m³/h	/	
Power source				N,V,Hz	1N 220V 50HZ	
Running current(max. running current)				A / A	cooling ： 32/38 heating ： 32/36	
Outdoor unit	Unit model (color)				WHITE	
	Compressor	Model / Manufacture			EHV46FAL1/MITSUBISHI	
		Type			scroll	
	Fan	Type × Number			Axial-flowX2	
		Speed		r/min	840	
		Fan motor output power		kW		
		Air-flow(H-M-L)		m³/h	6500	
	Heat exchanger	Type / Diameter		mm	/	
		Total area		m²	/	
		Temp. scope		℃	/	
	Dimension	External	（L×W×H）	mm×mm×mm	1250×1035×340	
		Package	（L×W×H）	mm×mm×mm	1375×1050×440	
	Drainage pipe (material , I.D./O.D.)			mm	/	
	Refrigerant control method			mm/mm	capillary +electrionic expansion valve	
	Defrosting				Auto	
	Volume of Accumulator			L	/	
	Noise level			dB(A)	60/-/-	
	Type of Four way valve				/	
	material of reduce noise				Rubber bracket	
	crankcase heater power			W	/	
	Weight (Net / Shipping)			kg / kg	125/145	
PIPING	Refrigerant	Type / Charge		g	R22 6500	
		Recharge quantity		g/m	/	
	Pipe	Liquid		mm	9.52	
		Gas		mm	19.05	
	Connecting Method				flared	
	Between I.D &O.D	MAX.Drop		m	30	
		MAX.Piping length		m	70	

Item / model					AU48NFIAIA	
Function					Cooling	Heating
Capacity				BTU/h	48000	56000
Total power input				W	6000	6000
Max. power input				W	7200	7000
Dehumidifying capacity				10 - ³×m³/h	/	
Power source				N,V,Hz	3N 380V 50HZ	
Running current(max. running current)				A / A	cooling ： 10/13 heating ： 10/12	
Outdoor unit	Unit model (color)				WHITE	
	Compressor	Model / Manufacture			JT100BHVYE/DAIKIN	
		Type			scroll	
	Fan	Type × Number			Axial-flowX2	
		Speed		r/min	840	
		Fan motor output power		kW		
		Air-flow(H-M-L)		m³/h	6500	
	Heat exchanger	Type / Diameter		mm	/	
		Total area		m²	/	
		Temp. scope		℃	/	
	Dimension	External	（L×W×H）	mm×mm×mm	1250×1035×340	
		Package	（L×W×H）	mm×mm×mm	1375×1050×440	
	Drainage pipe (material , I.D./O.D.)			mm	/	
	Refrigerant control method			mm/mm	capillary +electrionic expansion valve	
	Defrosting				Auto	
	Volume of Accumulator			L	/	
	Noise level			dB(A)	60/-/-	
	Type of Four way valve				/	
	material of reduce noise				Rubber bracket(compressor use)	
	crankcase heater power			W	/	
	Weight (Net / Shipping)			kg / kg	125/145	
PIPING	Refrigerant	Type / Charge		g	R22 6500	
		Recharge quantity		g/m	/	
	Pipe	Liquid		mm	9.52	
		Gas		mm	19.05	
	Connecting Method				flared	
	Between I.D &O	MAX.Drop		m	30	
		MAX.Piping length		m	70	

Item / model				AB092FCAHA	AB142FCAHA
Cooling capacity			Btu / h	10000	14000
Heating capacity			Btu / h	12000	17000
Cooling capacity			W	3200	4000
Heating capacity			W	4000	5000
Dehumidifying capacity			10 - ³×m³/h	1.8	1.8
Power source			N，V，Hz	1PH 220V-230V 50HZ	1PH 220V-230V 50HZ
Refrigerant				R22	R22
Noise level(H/M/L)			dB(A)	42.6/35.0/31.7	42.6/35.0/31.7
Fan		Type × Number		centrifugal fan×1	centrifugal fan×1
		Air-flow(H-M-L)	m³/h	700	700
		starting mothod		Relay control	Relay control
Heat exchanger				Combination of wave cranny radiation fin and copper pipe	Combination of wave cranny radiation fin and copper pipe
Refrigerant control method				Capillary + Electronic expansion valve	Capillary + Electronic expansion valve
Dimension （L×W×H）		External	mm×mm×mm	700×570×276	700×570×276
Weight(unit/panel)		Net	kg / kg	26/4.2	26/4.2
Piping	Liquid		mm	6.35	6.35
	Gas		mm	12.7	12.7
	Connection method			flared	flared
Suited area			m2	12~23	17~27
Controller type				wired controller or remote controller	wired controller or remote controller

Item / model				AB182FCAHA	AC182FCAHA
Cooling capacity			Btu / h	18000	18000
Heating capacity			Btu / h	21000	21000
Cooling capacity			W	5000	5000
Heating capacity			W	6000	6000
Dehumidifying capacity			10 - ³×m³/h	2.1	2.1
Power source			N，V，Hz	1PH 220V-230V 50HZ	1PH 220V-230V 50HZ
Refrigerant				R22	R22
Noise level(H/M/L)			dB(A)	43/42/39	48/44/38
Fan		Type × Number		centrifugal fan×1	centrifugal fan×1
		Air-flow(H-M-L)	m³/h	1000	860
		starting mothod		Relay control	Relay control
Heat exchanger				Combination of wave cranny radiation fin and copper pipe	Combination of wave cranny radiation fin and copper pipe
Refrigerant control method				Capillary + Electronic expansion valve	Capillary + Electronic expansion valve
Dimension （L×W×H）		External	mm×mm×mm	750×750×320	990×655×199
Weight(unit/panel)		Net	kg / kg	29/3.5	30
Piping	Liquid		mm	9.52	9.52
	Gas		mm	15.88	15.88
	Connection method			flared	flared
Suited area			m2	22~33	22~33
Controller type				wired controller or remote controller	remote controller

Item / model				AE072FCAKA	AE092FCAKA
Cooling capacity			Btu / h	7000	9000
Heating capacity			Btu / h	9000	11000
Cooling capacity			W	1800	2500
Heating capacity			W	2400	3000
Dehumidifying capacity			10 - ³×m³/h	1.2	1.6
Power source			N，V，Hz	1PH 220V-230V 50HZ	1PH 220V-230V 50HZ
Refrigerant				R22	R22
Noise level(H/M/L)			dB(A)	36/-/-	36/-/-
Fan	Type × Number			centrifugal fan×2	centrifugal fan×2
	Air-flow(H-M-L)		m³/h	420	520
	starting mothod			Relay control	Relay control
Heat exchanger				Combination of wave cranny radiation fin and copper pipe	Combination of wave cranny radiation fin and copper pipe
Refrigerant control method				Capillary + Electronic expansion valve	Capillary + Electronic expansion valve
Dimension （L×W×H）	External		mm×mm×mm	663×440×225	650×450×225
Weight(unit/panel)	Net		kg / kg	11.6	18
Piping	Liquid		mm	6.35	6.35
	Gas		mm	9.52	9.52
	Connection method			flared	flared
Suited area			m2	8~16	11~21
Controller type				wired controller or remote controller	wired controller or remote controller

Item / model				AE122FCAKA	AE182FCAKA
Cooling capacity			Btu / h	12000	18000
Heating capacity			Btu / h	14000	21000
Cooling capacity			W	3200	5000
Heating capacity			W	4000	6000
Dehumidifying capacity			10 - ³×m³/h	1.8	2.4
Power source			N，V，Hz	1PH 220V-230V 50HZ	1PH 220V-230V 50HZ
Refrigerant				R22	R22
Noise level(H/M/L)			dB(A)	38/38/40	40/42/44
Fan	Type × Number			centrifugal fan×2	centrifugal fan×2
	Air-flow(H-M-L)		m³/h	650	1000
	starting mothod			Relay control	Relay control
Heat exchanger				Combination of wave cranny radiation fin and copper pipe	Combination of wave cranny radiation fin and copper pipe
Refrigerant control method				Capillary + Electronic expansion valve	Capillary + Electronic expansion valve
Dimension （L×W×H）	External		mm×mm×mm	804×450×225	1024×450×225
Weight(unit/panel)	Net		kg / kg	20	25
Piping	Liquid		mm	6.35	9.52
	Gas		mm	12.7	15.88
	Connection method			flared	flared
Suited area			m2	12~23	23~36
Controller type				wired controller or remote controller	wired controller or remote controller

Item			model	AE212FCAKA	AE242FCAKA
Cooling capacity			Btu / h	21000	24000
Heating capacity			Btu / h	24000	28000
Cooling capacity			W	6000	7100
Heating capacity			W	7000	8000
Dehumidifying capacity			10 - ³×m³/h	2.4	3
Power source			N，V，Hz	1PH 220V-230V 50HZ	1PH 220V-230V 50HZ
Refrigerant				R22	R22
Noise level(H/M/L)			dB(A)	40/42/44	38/42/46
Fan		Type × Number		centrifugal fan×2	centrifugal fan×3
		Air-flow(H-M-L	m³/h	1000	900~1500
		starting mothod		Relay control	Relay control
Heat exchanger				Combination of wave cranny radiation fin and copper pipe	Combination of wave cranny radiation fin and copper pipe
Refrigerant control method				Capillary + Electronic expansion valve	Capillary + Electronic expansion valve
Dimension （L×W×H）		External	mm×mm×mm	1024×450×225	1380×450×225
Weight(unit/panel)		Net	kg / kg	25	42
Piping	Liquid		mm	9.52	9.52
	Gas		mm	15.88	15.88
	Connection method			flared	flared
Suited area			m2	27~41	32~49
Controller type				wired controller or remote controller	wired controller or remote controller

Item			model	AP182FAAHA	AS062FMAHA
Cooling capacity			Btu / h	17000	6000
Heating capacity			Btu / h	21000	8000
Cooling capacity			W	5000	1800
Heating capacity			W	6000	2400
Dehumidifying capacity			10 - ³×m³/h	2.6	0.8
Power source			N，V，Hz	1PH 220V-230V 50HZ	1PH 220V-230V 50HZ
Refrigerant				R22	R22
Noise level(H/M/L)			dB(A)	48/45/39	30/37/39
Fan		Type × Number		centrifugal fan×1	cross fan×1
		Air-flow(H-M-L	m³/h	900	400
		starting mothod		Relay control	Relay control
Heat exchanger				Combination of wave cranny radiation fin and copper pipe	Combination of wave cranny radiation fin and copper pipe
Refrigerant control method				Capillary + Electronic expansion valve	Capillary + Electronic expansion valve
Dimension （L×W×H）		External	mm×mm×mm	1746×500×250	795×265×182
Weight(unit/panel)		Net	kg / kg	36	7.2
Piping	Liquid		mm	9.52	6.35
	Gas		mm	15.88	9.52
	Connection method			flared	flared
Suited area			m2	23~36	8~16
Controller type				wired controller or remote controller	wired controller or remote controller

Item / model				AS072FMAHA	AS092FMAHA
Cooling capacity			Btu / h	7000	10000
Heating capacity			Btu / h	9000	13000
Cooling capacity			W	2500	3200
Heating capacity			W	3000	4000
Dehumidifying capacity			10 - ³×m³/h	1.19	1.6
Power source			N，V，Hz	1PH 220V-230V 50HZ	1PH 220V-230V 50HZ
Refrigerant				R22	R22
Noise level(H/M/L)			dB(A)	30/37/39	30/37/39
Fan	Type × Number			cross fan×1	cross fan×1
	Air-flow(H-M-L		m³/h	420	500
	starting mothod			Relay control	Relay control
Heat exchanger				Combination of wave cranny radiation fin and copper pipe	Combination of wave cranny radiation fin and copper pipe
Refrigerant control method				Capillary + Electronic expansion valve	Capillary + Electronic expansion valve
Dimension（L×W×H）	External		mm×mm×mm	795×265×182	795×265×182
Weight(unit/panel)	Net		kg / kg	7.2	7.6
Piping	Liquid		mm	6.35	6.35
	Gas		mm	9.52	12.7
	Connection method			flared	flared
Suited area			m2	11~21	12~23
Controller type				wired controller or remote controller	wired controller or remote controller

Item / model				AS122FMAHA	AS182FTAHA
Cooling capacity			Btu / h	12000	18000
Heating capacity			Btu / h	14000	21000
Cooling capacity			W	4000	5600
Heating capacity			W	5000	6500
Dehumidifying capacity			10 - ³×m³/h	2.1	2.55
Power source			N，V，Hz	1PH 220V-230V 50HZ	1PH 220V-230V 50HZ
Refrigerant				R22	R22
Noise level(H/M/L)			dB(A)	33/38/41	42/45/47
Fan	Type × Number			cross fan×1	cross fan×1
	Air-flow(H-M-L		m³/h	600	800
	starting mothod			Relay control	Relay control
Heat exchanger				Combination of wave cranny radiation fin and copper pipe	Combination of wave cranny radiation fin and copper pipe
Refrigerant control method				Capillary + Electronic expansion valve	Capillary + Electronic expansion valve
Dimension（L×W×H）	External		mm×mm×mm	938×265×182	1100×330×205
Weight(unit/panel)	Net		kg / kg	11	14
Piping	Liquid		mm	6.35	9.52
	Gas		mm	12.7	15.88
	Connection method			flared	flared
Suited area			m2	17~27	23~36
Controller type				wired controller or remote controller	wired controller or remote controller

Item / model			AE142FCAKA
Cooling capacity		Btu / h	14000
Heating capacity		Btu / h	16000
Cooling capacity		W	4000
Heating capacity		W	5000
Dehumidifying capacity		10 - ³×m³/h	2
Power source		N，V，Hz	1PH 220V-230V 50HZ
Refrigerant			R22
Noise level(H/M/L)		dB(A)	38/41/42
Fan	Type × Number		centrifugal fan×2
	Air-flow(H-M-L)	m³/h	700
	starting mothod		Relay control
Heat exchanger			Combination of wave cranny radiation fin and copper pipe
Refrigerant control method			Capillary + Electronic expansion valve
Dimension （L×W×H）	External	mm×mm×mm	804×450×225
Weight(unit/panel)	Net	kg / kg	20
Piping — Liquid		mm	6.35
Piping — Gas		mm	12.7
Piping — Connection method			flared
Suited area		m2	17~27
Controller type			wired controller or remote controller

3 SAFETY PRECAUTIONS

- Please read these "Safety Precautions" first then accurately execute the installation work.
- Though the precautionary points indicated herein are divided under two headings, △WARNING and △CAUTION those points which are related to the strong possibility of an installation done in error resulting in death or serious injury are listed in the △WARNING section. However, there is also a possibility of serious consequences in relationship to the points listed in the △CAUTION section as well. In either case, important safety related information is indicated, so by all means, properly observe all that is mentioned.
- After completing the installation, along with confirming that no abnormalities were seen from the operation tests, please explain operating methods as well as maintenance methods to the user (customer) of this equipment, based on the owner's manual.

Moreover, ask the customer to keep this sheet together with the owner's manual.

△ WARNING

- This system should be applied to places of office, restaurant, residence and the like. Appliaction to inferior environment such as engineering shop could cause equipment malfunction.
- Please entrust installation to either the company which sold you the equipment or to a professional contractor. Defects from improper installations can be the cause of water leakage, electric shocks and fires.
- Execute the installation accurately, based on following the installation manual. Again, improper installations can result in water leakage, electric shocks and fires.
- When a large air-conditioning system is installed to a small room, it is necessary to have a prior planned countermeasure for the rare case of a refrigerant leakage, to prevent the exceeding of threshold concentration. In regards to preparing this countermeasure, consult with the company from which you purchased the equipment, and make the installation accordingly. In the rare event that a refrigerant leakage and exceeding of threshold concentration does occur,there is the danger of a resultant oxygen deficiency accident.
- For installation, confirm that the installation site can sufficiently support heavy weight. When strength is insufficient, injury can result from a falling of the unit.
- Execute the prescribed installation construction to prepare for earthquakes and the strong winds of typhoons and hurricanes, etc. Improper installations can result in accidents due to a violent falling over of the unit.
- For electrical work, please see that a licensed electrician executes the work while following the safety standards related to electrical equipment, and local regulations as well as the installation instructions, and that only exclusive use circuits are used.

  Insufficient power source circuit capacity and defective installment execution can be the cause of electric shocks and fires.
- Accurately connect wiring using the proper cable, and insure that the external force of the cable is not conducted to the terminal connection part, through properly securing it. Improper connection or securing can result in heat generation or fire.
- Take care that wiring does not rise upward, and accurately install the lid/service panel. Its improper installation can also result in heat generation or fire.

△ WARNING

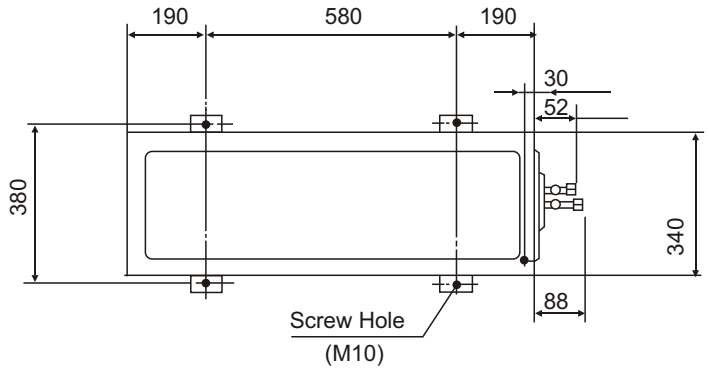
- When setting up or moving the location of the air conditioner, do not mix air etc. or anything other than the designated refrigerant (please see nameplate) within the refrigeration cycle.
- Rupture and injury caused by abnormal high pressure can result from such mixing.
  Always use accessory parts and authorized parts for installation construction. Using parts not authorized by this company can result in water leakage, electric shock, fire and refigerant leakage.
- The position of indoor unit must be above the floor 2.5m.

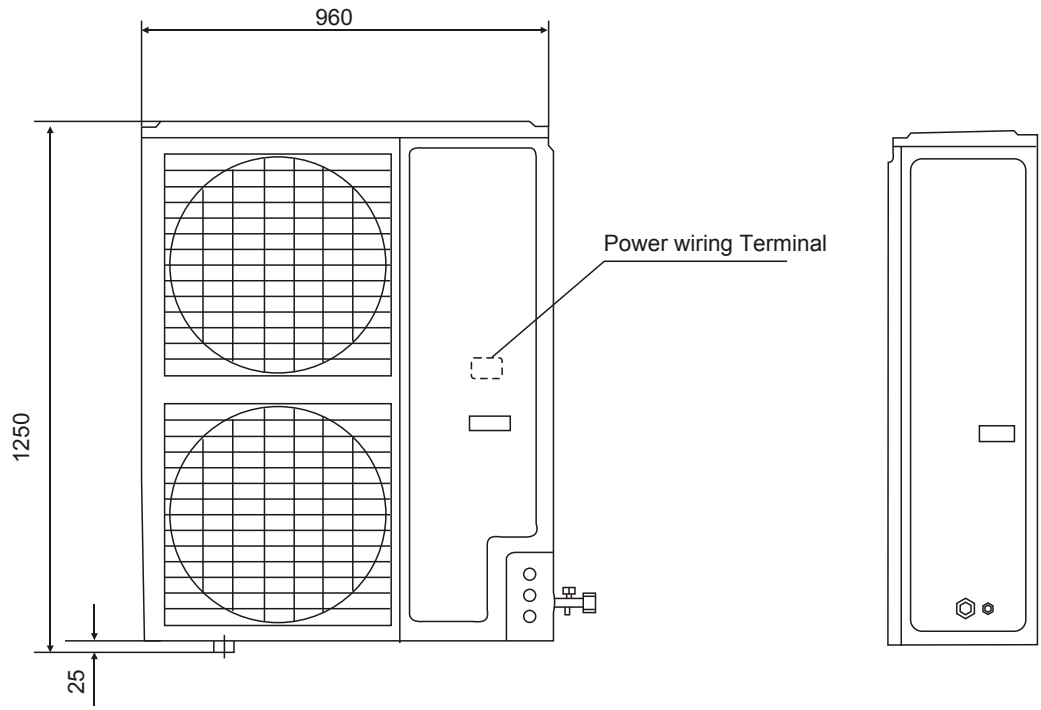
△ CAUTION

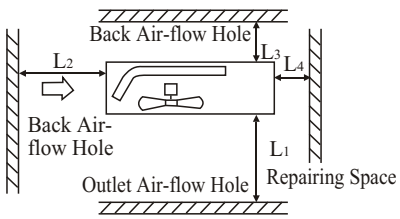
- Execute proper grounding. Do not connect the ground wire to a gas pipe, water pipe, lightening rod or a telephone ground wire.
  Improper placement of ground wires can result in electric shock.
- The installation of an earth leakage breaker is necessary depending on the established location of the unit. Not installing an earth leakage breaker may result in electric shock.
- Do not install the unit where there is a concern about leakage of combustible gas.
  The rare event of leaked gas collecting around the unit could result in an outbreak of fire.
- For the drain pipe, follow the installation manual to insure that it allows proper drainage and thermally insulate it to prevent condensation. Inadequate plumbing can result in water leakage and water damage to interior items.

Net dimensions of indoor and outdoor

A. model: AU48-







Installation Servicing Space(at Least)

Unit:mm

Dimension \ Installation	I	II	III
L_1	Leave space	Leave space	500
L_2	300	0	Leave space
L_3	100	150	100
L_4	0	0	0

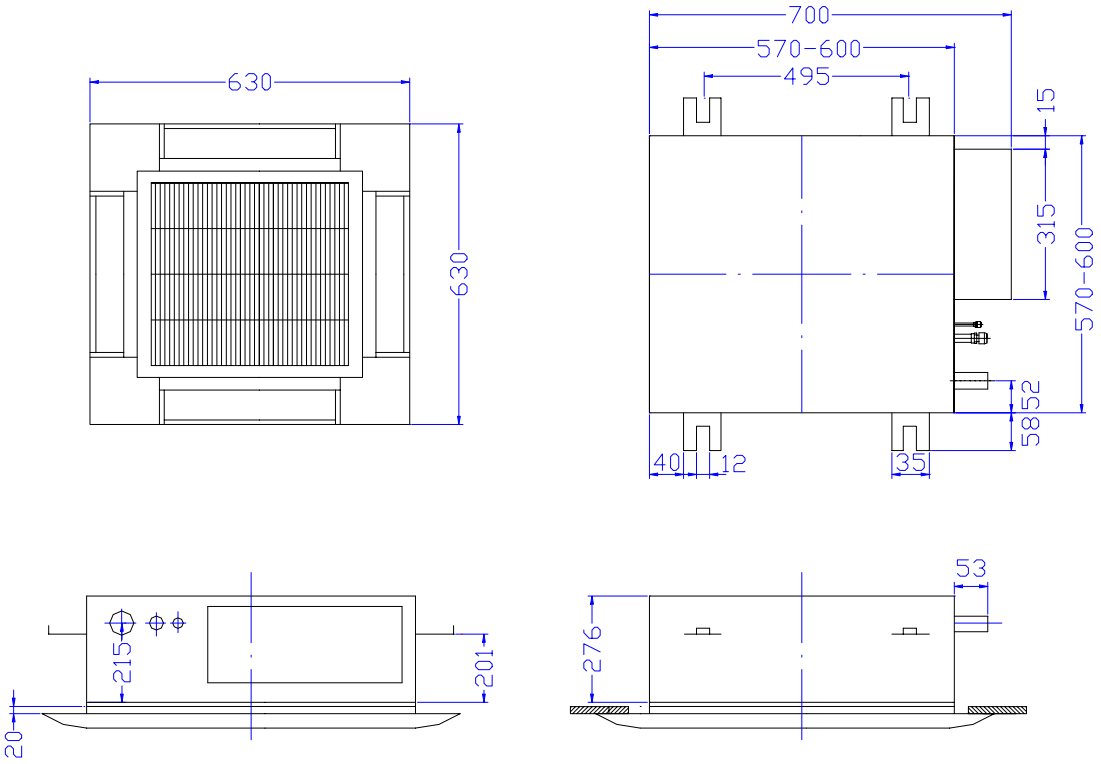
Note : (1). Fix the parts with screws

(2).Don't intake the strong wind directly to the outlet air-flow hole.

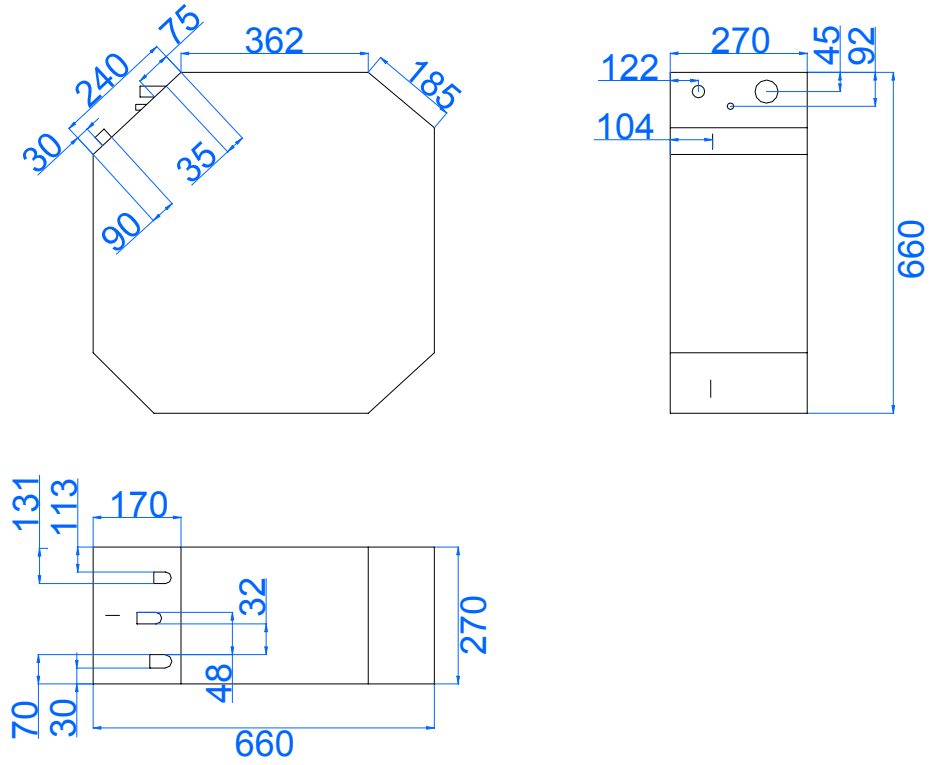
(3).A one meter distance should be kept from the unit top

(4).Don't block the surroundings of the unit with sundries

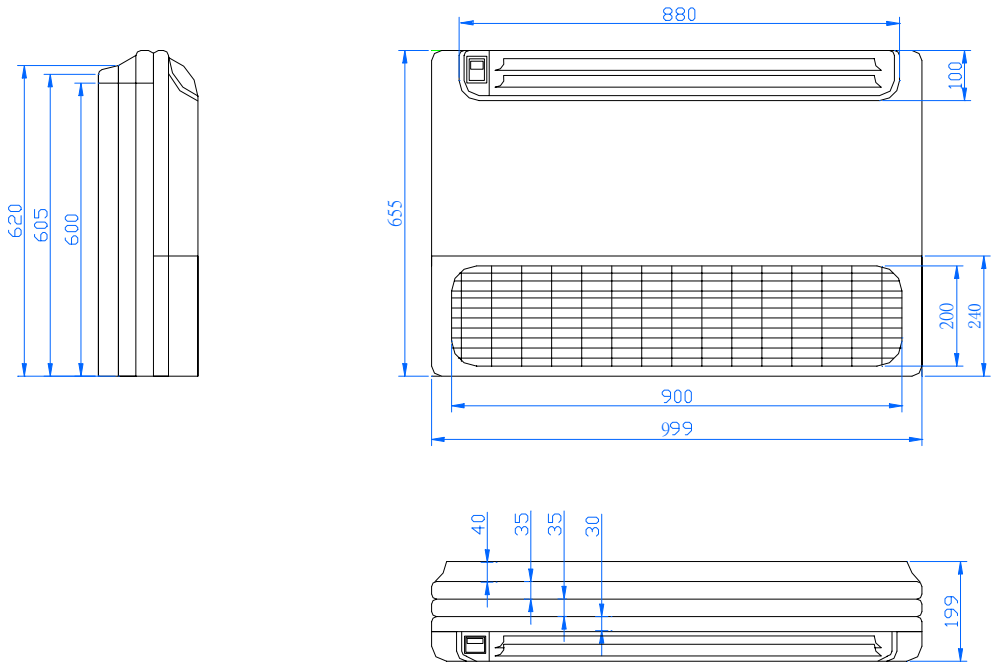
Model: AB092FCAHA AB142FCAHA



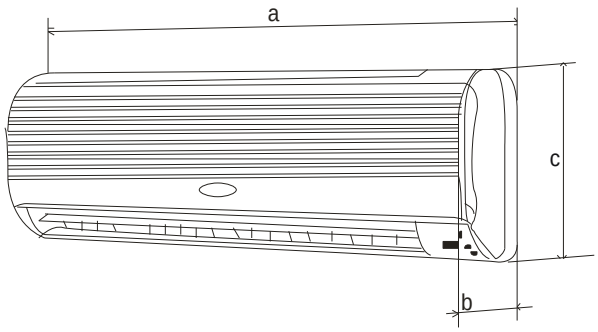
Model: AB182FCAHA



Model: AC182FCAHA

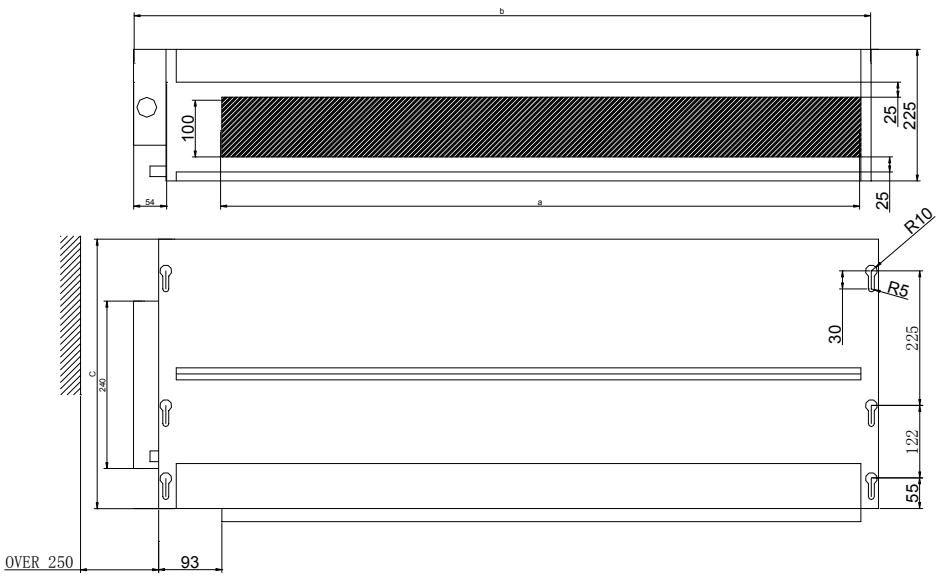


Model: Wall mounted

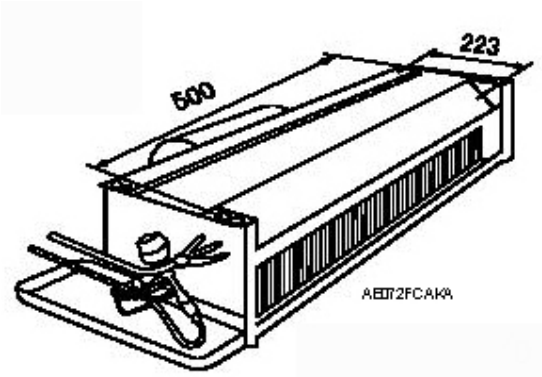


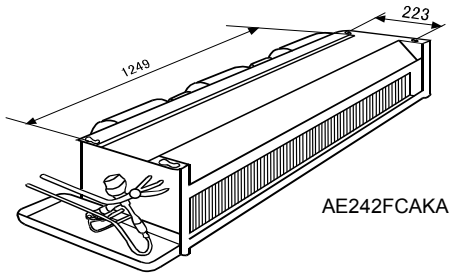
	a	b	c
AS062FMAHA	795	182	265
AS072FMAHA	795	182	265
AS092FMAHA	795	182	265
AS122FMAHA	938	182	265
AS182FTAHA	1100	205	330

Model: ceiling concealed



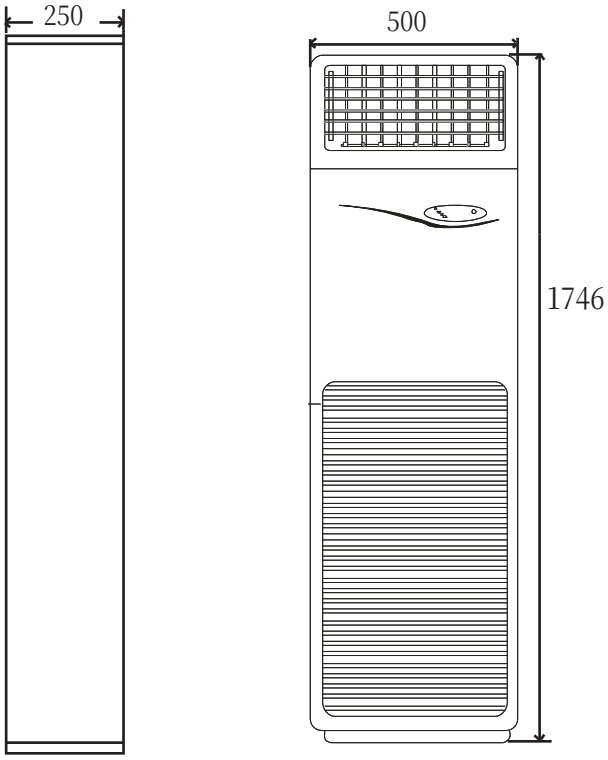
unit model	a	b	c
AE092FCAKA	615	702	452
AE122FCAKA	770	704	452
AE142FCAKA	770	704	452
AB182FCAKA	990	858	452
AE212FCAKA	990	858	452





AE242FCAKA

Model: AP182FAAHA



5 INSTALLATION STRUCTION

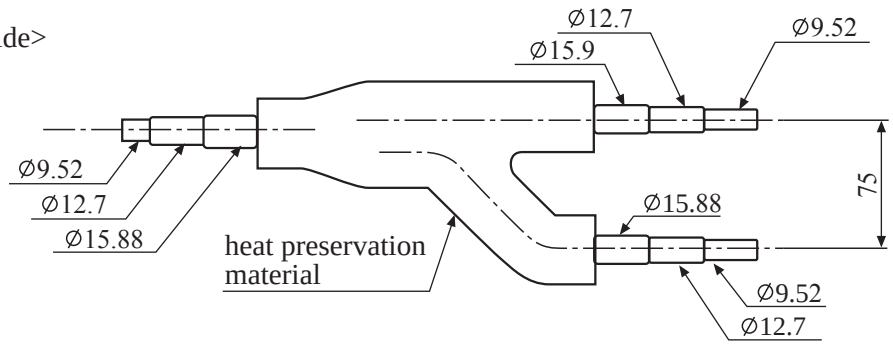
5.1 Piping dimensions charts

model	liquid pipe		gas pipe	
	mm	inch	mm	inch
AU48	9.52	3/8"	19.05	3/4"
AB09	6.35	1/4"	12.7	1/2"
AB14	6.35	1/4"	12.7	1/2"
AB18	9.52	3/8"	15.88	5/8"
AC18	9.52	3/8"	15.88	5/8"
AE07	6.35	1/4"	9.52	3/8"
AE09	6.35	1/4"	9.52	3/8"
AE12	6.35	1/4"	12.7	1/2"
AE14	6.35	1/4"	12.7	1/2"
AE18	9.52	3/8"	15.88	5/8"
AE21	9.52	3/8"	15.88	5/8"
AE24	9.52	3/8"	15.88	5/8"
AP18	9.52	3/8"	15.88	5/8"
AS06	6.35	1/4"	9.52	3/8"
AS07	6.35	1/4"	9.52	3/8"
AS09	6.35	1/4"	12.7	1/2"
AS12	6.35	1/4"	12.7	1/2"
AS18	9.52	3/8"	15.88	5/8"

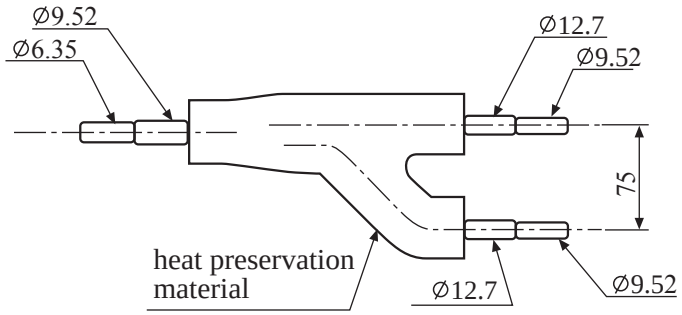
5.2 Y-shape manifold pipe

model: FQG-B120

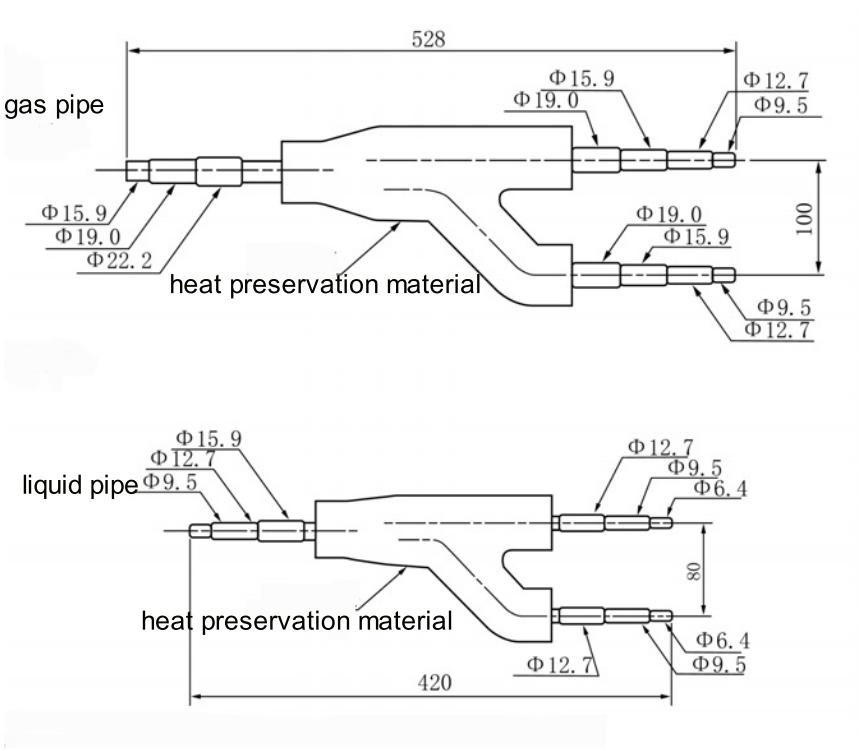
<gas side>



<liquid side>



Dimension is the out diameter connecting to the tubing.



Refrigerant pipes between manifold pipes

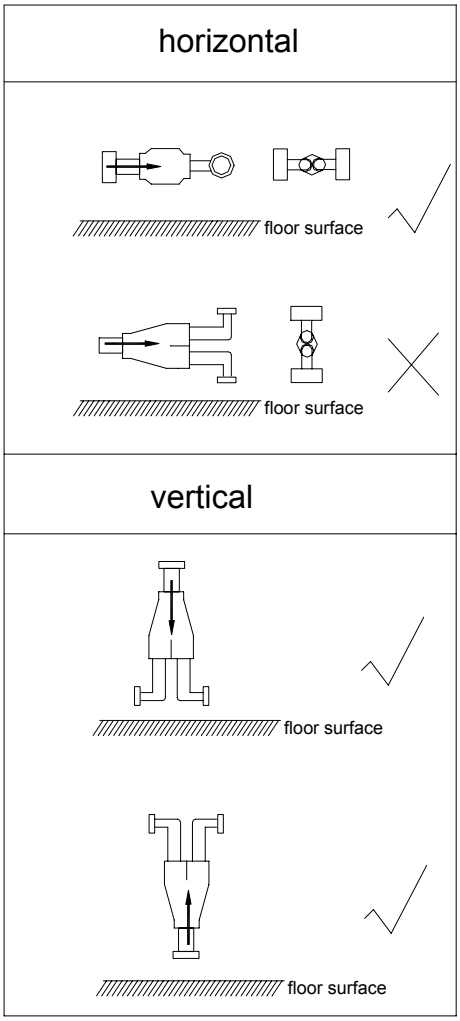
Total refrigerating amount of indoor unit group after the manifold pipe	Gas side	Liquid side
Less than 38220Btu/h	15.9	9.52
38220~61157Btu/h	19.05	9.52
61157~126137Btu/h	25.4	12.7

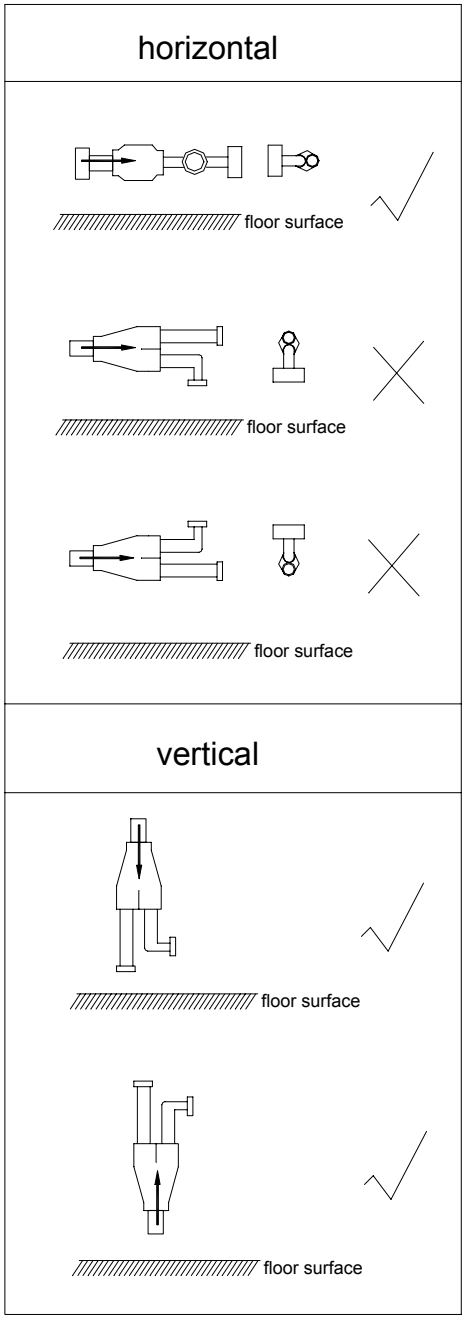
Note: 1. Y-shape manifold pipe can be placed in horizontal or vertical direction

2. The manifold pipes must be welded with hard-solder

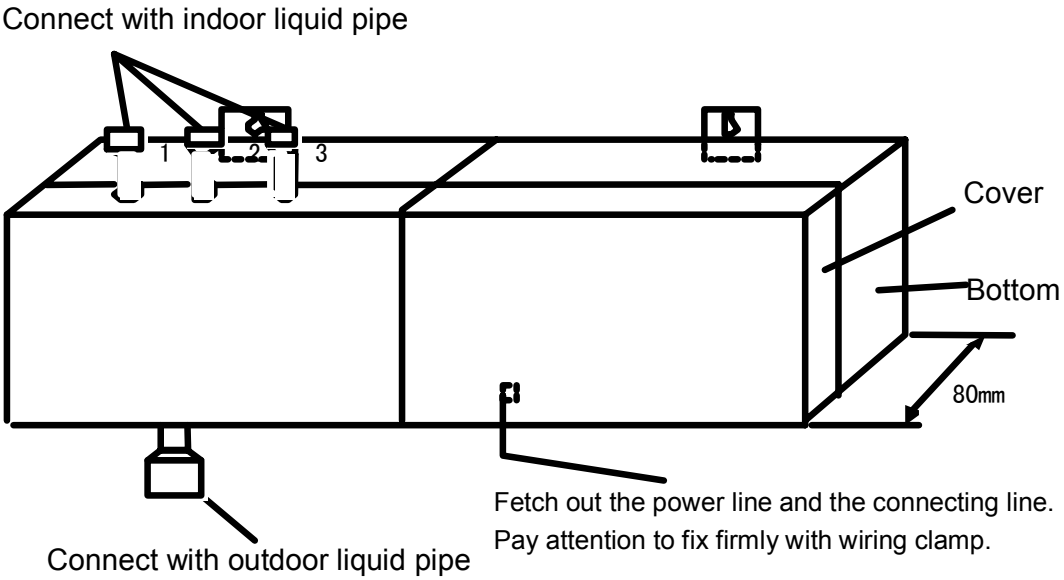
3. Pay attention to cut off the unnecessary part from its middle parts of each joint, and to remove burr.

In the file, the figure marked with " √ " is permitted, and the figure marked with "×" is prohibited.
You can confirm the position according to the actual condition.
The refrigerant flow direction is always from the collective side to the divided side.

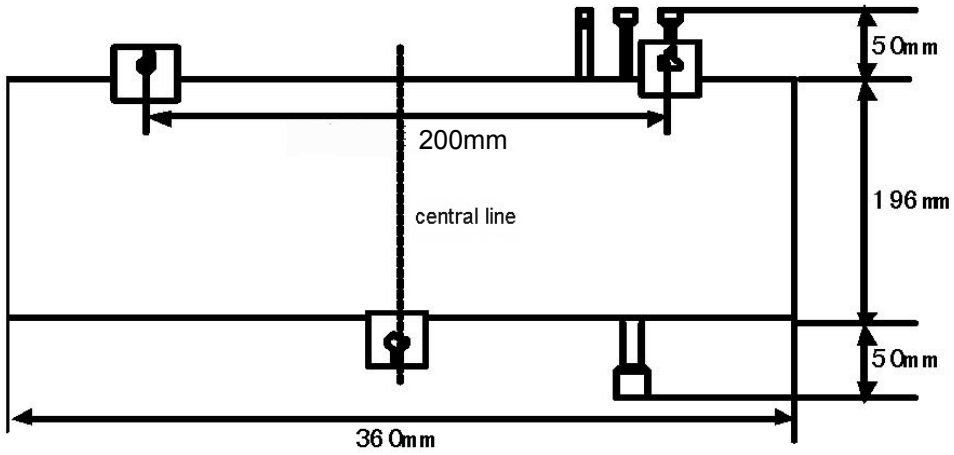




MP3、MP2 Electronic Expansion Valve Box figure:



MP3、MP2 installation dimension:



MP3（MP2）installation procedure：

1、Installation of MP3（MP2）can be used for CEILING CONCEALED MODEL

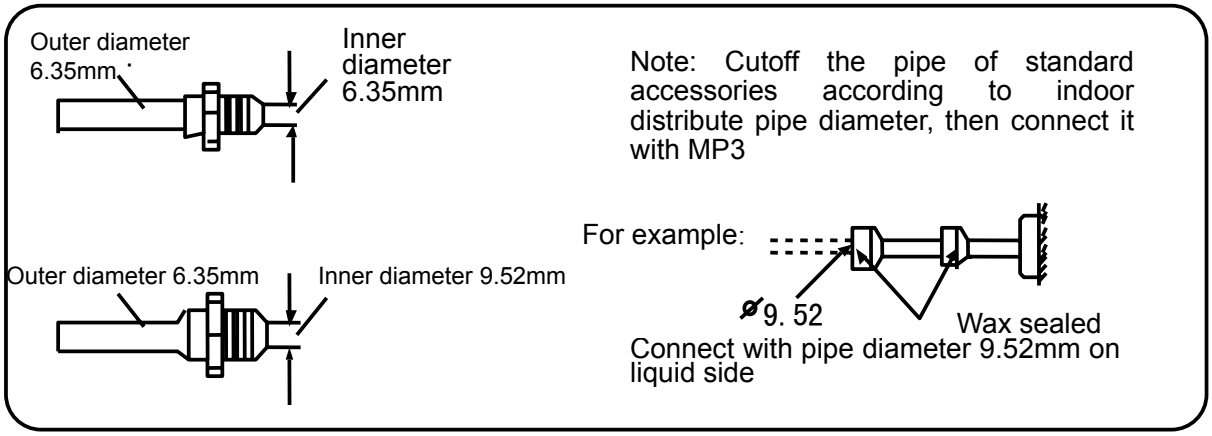
A、Piping connection

a、When connecting with indoor unit，refrigerant pipe and the connection wire must be corresponding with the code（A、B、C…） on the device.

NOTE: **When using two or more than two MP3 devices (need two or more than two MP3 devices on connecting more than three indoor units), MUST mark definitely Room code of connected indoor unit on the MP3 label, so as to air conditioner maintain conveniently.**

b、When connecting indoor unit, firstly please weld MP3 with the corresponding contribution pipe in the accessories table, then connect MP3 with corresponding indoor connection pipe.

c、MP3 can only be connected with liquid pipe of the unit, the gas pipe connection is the same as the old ceiling concealed model.



B、MP3(MP2) device installation position

a、MP3(MP2) device should be counted on the vertical wall, maintenance cover panel must be to the outer, and open a maintenance door over 600mm out of the panel.

b、Indoor distribution pipe must be fetched out from up of MP3 to any direction.

c、Lean must be in the range of ±5°.

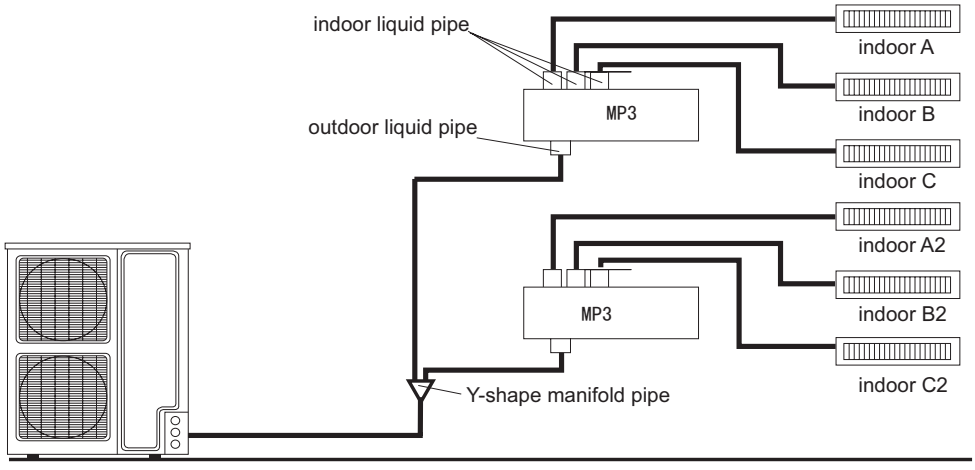
C、Wiring connection:

a、Power wiring、communication wiring of the same indoor unit must correspond with its connection pipe、electronic expansion valve (refer to the wiring diagram on the indoor electric box cover and MP3).The distance from indoor to MP2(MP3) can be up to 15m.

b、After wiring connection, the wiring must be fixed firmly with wire clip.

2.Connection figure

MP2 can be used for two indoor units, please confirm the MP2 quantity according to the actual indoor units. MP3 can be used for three indoor units, please confirm the MP3 quantity according to the actual indoor units. Installation method is below, which only takes MP3 as an example. Please pay attention that the gas pipes installation is as the same as the condition without MP2(MP3).



ADMISSIBLE COMBINATION EXAMPLES OF MULTIFLEX INVERTER

Type of INDOOR UNITS CIRCUIT （×100W）								REAL COOLING CAPACITY (OF EACH UNIT IN COMBINATION) Kw								REAL HEATING CAPACITY (OF EACH UNIT IN COMBINATION) kW								kW	
																								TOTAL COOLING CAPACITY	TOTAL HEATING CAPACITY
18	18	18	18	18	18	18	18	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	14.00	16.00
18	18	18	18	18	18	71		1.41	1.41	1.41	1.41	1.41	1.41	5.54		1.61	1.61	1.61	1.61	1.61	1.61	6.35		14.00	16.00
18	18	18	18	18	18	60		1.50	1.50	1.50	1.50	1.50	1.50	5.00		1.71	1.71	1.71	1.71	1.71	1.71	5.71		14.00	16.00
18	18	18	18	18	18	56		1.54	1.54	1.54	1.54	1.54	1.54	4.76		1.76	1.76	1.76	1.76	1.76	1.76	5.46		14.00	16.00
18	18	18	18	18	18	56	18	1.38	1.38	1.38	1.38	1.38	1.38	4.34	1.38	1.58	1.58	1.58	1.58	1.58	1.58	4.92	1.58	14.00	16.00
18	18	18	18	18	18	50		1.59	1.59	1.59	1.59	1.59	1.59	4.46		1.82	1.82	1.82	1.82	1.82	1.82	5.06		14.00	16.00
18	18	18	18	18	18	50	18	1.43	1.43	1.43	1.43	1.43	1.43	3.99	1.43	1.64	1.64	1.64	1.64	1.64	1.64	4.55	1.64	14.00	16.00
18	18	18	18	18	18	40		1.70	1.70	1.70	1.70	1.70	1.70	3.80		1.95	1.95	1.95	1.95	1.95	1.95	4.32		14.00	16.00
18	18	18	18	18	18	40	18	1.52	1.52	1.52	1.52	1.52	1.52	3.36	1.52	1.73	1.73	1.73	1.73	1.73	1.73	3.86	1.73	14.00	16.00
18	18	18	18	18	18	32		1.80	1.80	1.80	1.80	1.80	1.80	3.20		2.06	2.06	2.06	2.06	2.06	2.06	3.66		14.00	16.00
18	18	18	18	18	18	32	18	1.59	1.59	1.59	1.59	1.59	1.59	2.87	1.59	1.82	1.82	1.82	1.82	1.82	1.82	3.24	1.82	14.00	16.00
18	18	18	18	18	18	25		1.89	1.89	1.89	1.89	1.89	1.89	2.66		2.17	2.17	2.17	2.17	2.17	2.17	3.01		14.00	16.00
18	18	18	18	18	18	25	18	1.67	1.67	1.67	1.67	1.67	1.67	2.31	1.67	1.91	1.91	1.91	1.91	1.91	1.91	2.65	1.91	14.00	16.00
18	18	18	18	18	18	40		1.70	1.70	1.70	1.70	1.70	1.70	3.80		1.95	1.95	1.95	1.95	1.95	1.95	4.32		14.00	16.00
18	18	18	18	18	18	40	32	1.40	1.40	1.40	1.40	1.40	1.40	3.11	2.49	1.60	1.60	1.60	1.60	1.60	1.60	3.56	2.84	14.00	16.00
18	18	18	18	18	18	40	25	1.46	1.46	1.46	1.46	1.46	1.46	3.24	2.00	1.66	1.66	1.66	1.66	1.66	1.66	3.70	2.31	14.00	16.00
18	18	18	18	18	18	32	25	1.53	1.53	1.53	1.53	1.53	1.53	2.72	2.10	1.75	1.75	1.75	1.75	1.75	1.75	3.10	2.42	14.00	16.00
18	18	18	18	18	18	32		1.80	1.80	1.80	1.80	1.80	1.80	3.20		2.06	2.06	2.06	2.06	2.06	2.06	3.66		14.00	16.00
18	18	18	18	18	18	25	25	1.59	1.59	1.59	1.59	1.59	1.59	2.23	2.23	1.82	1.82	1.82	1.82	1.82	1.82	2.53	2.53	14.00	16.00
18	18	18	18	18	18	25		1.89	1.89	1.89	1.89	1.89	1.89	2.66		2.17	2.17	2.17	2.17	2.17	2.17	3.01		14.00	16.00
18	18	18	18	18	18	18		2.00	2.00	2.00	2.00	2.00	2.00	2.00		2.29	2.29	2.29	2.29	2.29	2.29	2.29		14.00	16.00
18	18	18	18	18	71			1.57	1.57	1.57	1.57	1.57	6.15			1.79	1.79	1.79	1.79	1.79	7.06			14.00	16.00
18	18	18	18	18	60	25		1.44	1.44	1.44	1.44	1.44	4.80	2.00		1.65	1.65	1.65	1.65	1.65	5.49	2.29		14.00	16.00
18	18	18	18	18	60			1.68	1.68	1.68	1.68	1.68	5.60			1.92	1.92	1.92	1.92	1.92	6.40			14.00	16.00
18	18	18	18	18	56	32		1.42	1.42	1.42	1.42	1.42	4.40	2.50		1.62	1.62	1.62	1.62	1.62	5.03	2.88		14.00	16.00
18	18	18	18	18	56	25		1.47	1.47	1.47	1.47	1.47	4.58	2.07		1.68	1.68	1.68	1.68	1.68	5.24	2.34		14.00	16.00
18	18	18	18	18	56			1.73	1.73	1.73	1.73	1.73	5.35			1.97	1.97	1.97	1.97	1.97	6.14			14.00	16.00
18	18	18	18	18	50	40		1.40	1.40	1.40	1.40	1.40	3.89	3.11		1.60	1.60	1.60	1.60	1.60	4.44	3.56		14.00	16.00

ADMISSIBLE COMBINATION EXAMPLES OF MULTIFLEX INVERTER

Type of INDOOR UNITS CIRCUIT （×100W）								REAL COOLING CAPACITY (OF EACH UNIT IN COMBINATION) Kw								REAL HEATING CAPACITY (OF EACH UNIT IN COMBINATION) kW								kW	
																								TOTAL COOLING CAPACITY	TOTAL HEATING CAPACITY
18	18	18	18	18	50	32		1.46	1.46	1.46	1.46	1.46	4.07	2.63		1.67	1.67	1.67	1.67	1.67	4.65	2.98		14.00	16.00
18	18	18	18	18	50	25		1.53	1.53	1.53	1.53	1.53	4.24	2.11		1.75	1.75	1.75	1.75	1.75	4.85	2.42		14.00	16.00
18	18	18	18	18	40	50		1.40	1.40	1.40	1.40	1.40	3.11	3.89		1.60	1.60	1.60	1.60	1.60	3.56	4.44		14.00	16.00
18	18	18	18	18	40	40		1.48	1.48	1.48	1.48	1.48	3.29	3.29		1.69	1.69	1.69	1.69	1.69	3.76	3.76		14.00	16.00
18	18	18	18	18	40	32		1.56	1.56	1.56	1.56	1.56	3.46	2.74		1.78	1.78	1.78	1.78	1.78	3.95	3.16		14.00	16.00
18	18	18	18	18	40	25		1.63	1.63	1.63	1.63	1.63	3.61	2.24		1.86	1.86	1.86	1.86	1.86	4.13	2.58		14.00	16.00
18	18	18	18	18	40			1.94	1.94	1.94	1.94	1.94	4.31			2.22	2.22	2.22	2.22	2.22	4.92			14.00	16.00
18	18	18	18	18	32	32		1.64	1.64	1.64	1.64	1.64	2.91	2.91		1.87	1.87	1.87	1.87	1.87	3.32	3.32		14.00	16.00
18	18	18	18	18	32	25		1.71	1.71	1.71	1.71	1.71	3.05	2.40		1.96	1.96	1.96	1.96	1.96	3.48	2.72		14.00	16.00
18	18	18	18	18	32			2.06	2.06	2.06	2.06	2.06	3.70			2.34	2.34	2.34	2.34	2.34	4.16			14.00	16.00
18	18	18	18	18	25	25		1.80	1.80	1.80	1.80	1.80	2.50	2.50		2.06	2.06	2.06	2.06	2.06	2.86	2.86		14.00	16.00
18	18	18	18	18	18			2.33	2.33	2.33	2.33	2.33	2.33			2.66	2.66	2.66	2.66	2.66	2.66			14.00	16.00
18	18	18	32	40	56			1.38	1.38	1.38	2.46	3.08	4.31			1.58	1.58	1.58	2.81	3.52	4.92			14.00	16.00
18	18	18	32	40	50			1.43	1.43	1.43	2.55	3.18	3.98			1.64	1.64	1.64	2.91	3.64	4.55			14.00	16.00
18	18	18	32	40	40			1.52	1.52	1.52	2.70	3.37	3.37			1.73	1.73	1.73	3.08	3.86	3.86			14.00	16.00
18	18	18	32	40	32			1.59	1.59	1.59	2.84	3.55	2.84			1.82	1.82	1.82	3.24	4.05	3.24			14.00	16.00
18	18	18	32	40	25			1.67	1.67	1.67	2.97	3.71	2.31			1.91	1.91	1.91	3.39	4.24	2.65			14.00	16.00
18	18	18	32	40	18			1.75	1.75	1.75	3.11	3.89	1.75			2.00	2.00	2.00	3.56	4.44	2.00			14.00	16.00
18	18	18	32	40				2.00	2.00	2.00	3.56	4.44				2.29	2.29	2.29	4.06	5.08				14.00	16.00
18	18	18	32	32	60			1.42	1.42	1.42	2.51	2.51	4.72			1.62	1.62	1.62	2.88	2.88	5.39			14.00	16.00
18	18	18	32	32	50			1.50	1.50	1.50	2.67	2.67	4.16			1.71	1.71	1.71	3.05	3.05	4.76			14.00	16.00
18	18	18	32	32	40			1.59	1.59	1.59	2.84	2.84	3.55			1.82	1.82	1.82	3.24	3.24	4.05			14.00	16.00
18	18	18	32	32	32			1.68	1.68	1.68	2.99	2.99	2.99			1.92	1.92	1.92	3.41	3.41	3.41			14.00	16.00
18	18	18	32	32	25			1.76	1.76	1.76	3.13	3.13	2.46			2.01	2.01	2.01	3.58	3.58	2.80			14.00	16.00
18	18	18	32	32	18			1.85	1.85	1.85	3.29	3.29	1.85			2.12	2.12	2.12	3.76	3.76	2.12			14.00	16.00
18	18	18	32	32				2.14	2.14	2.14	3.80	3.80				2.44	2.44	2.44	4.34	4.34				14.00	16.00
18	18	18	32	25	71			1.38	1.38	1.38	2.46	1.92	5.46			1.58	1.58	1.58	2.81	2.20	6.24			14.00	16.00
18	18	18	32	25	60			1.47	1.47	1.47	2.62	2.05	4.91			1.68	1.68	1.68	2.99	2.34	5.61			14.00	16.00

ADMISSIBLE COMBINATION EXAMPLES OF MULTIFLEX INVERTER

Type of INDOOR UNITS CIRCUIT （×100W）								REAL COOLING CAPACITY (OF EACH UNIT IN COMBINATION) Kw								REAL HEATING CAPACITY (OF EACH UNIT IN COMBINATION) kW								kW	
																								TOTAL COOLING CAPACITY	TOTAL HEATING CAPACITY
18	18	18	32	25	56			1.51	1.51	1.51	2.68	2.10	4.69			1.72	1.72	1.72	3.07	2.40	5.37			14.00	16.00
18	18	18	32	25	50			1.57	1.57	1.57	2.78	2.17	4.35			1.79	1.79	1.79	3.18	2.48	4.97			14.00	16.00
18	18	18	32	25	40			1.67	1.67	1.67	2.97	2.32	3.71			1.91	1.91	1.91	3.39	2.65	4.24			14.00	16.00
18	18	18	32	25	25			1.85	1.85	1.85	3.29	2.57	2.57			2.12	2.12	2.12	3.76	2.94	2.94			14.00	16.00
18	18	18	32	25	18			1.95	1.95	1.95	3.47	2.71	1.95			2.23	2.23	2.23	3.97	3.10	2.23			14.00	16.00
18	18	18	32	25				2.27	2.27	2.27	4.04	3.15				2.59	2.59	2.59	4.61	3.60				14.00	16.00
18	18	18	32	71	18			1.44	1.44	1.44	2.56	5.68	1.44			1.65	1.65	1.65	2.93	6.49	1.65			14.00	16.00
18	18	18	32	71				1.61	1.61	1.61	2.85	6.33				1.83	1.83	1.83	3.26	7.24				14.00	16.00
18	18	18	32	60	18			1.54	1.54	1.54	2.73	5.12	1.54			1.76	1.76	1.76	3.12	5.85	1.76			14.00	16.00
18	18	18	32	60				1.73	1.73	1.73	3.07	5.75				1.97	1.97	1.97	3.51	6.58				14.00	16.00
18	18	18	32	56	18			1.58	1.58	1.58	2.80	4.90	1.58			1.80	1.80	1.80	3.20	5.60	1.80			14.00	16.00
18	18	18	32	56				1.77	1.77	1.77	3.15	5.52				2.03	2.03	2.03	3.61	6.31				14.00	16.00
18	18	18	32	50	18			1.64	1.64	1.64	2.91	4.55	1.64			1.87	1.87	1.87	3.32	5.19	1.87			14.00	16.00
18	18	18	32	50				1.85	1.85	1.85	3.29	5.15				2.12	2.12	2.12	3.76	5.88				14.00	16.00
18	18	18	32	40	18			1.75	1.75	1.75	3.11	3.89	1.75			2.00	2.00	2.00	3.56	4.44	2.00			14.00	16.00
18	18	18	32	40				2.00	2.00	2.00	3.56	4.44				2.29	2.29	2.29	4.06	5.08				14.00	16.00
18	18	18	25	71				1.68	1.68	1.68	2.33	6.63				1.92	1.92	1.92	2.67	7.57				14.00	16.00
18	18	18	25	60				1.81	1.81	1.81	2.52	6.04				2.07	2.07	2.07	2.88	6.91				14.00	16.00
18	18	18	25	56				1.87	1.87	1.87	2.59	5.81				2.13	2.13	2.13	2.96	6.64				14.00	16.00
18	18	18	25	50				1.95	1.95	1.95	2.71	5.43				2.23	2.23	2.23	3.10	6.20				14.00	16.00
18	18	18	25	40				2.12	2.12	2.12	2.94	4.71				2.42	2.42	2.42	3.36	5.38				14.00	16.00
18	18	18	25	32				2.27	2.27	2.27	3.15	4.04				2.59	2.59	2.59	3.60	4.61				14.00	16.00
18	18	18	25	25				2.34	2.34	2.34	3.25	3.25				2.77	2.77	2.77	3.85	3.85				13.52	16.00
18	18	18	25	18				2.34	2.34	2.34	3.25	2.34				2.97	2.97	2.97	4.12	2.97				12.61	16.00
18	18	18	50					2.34	2.34	2.34	6.50					2.77	2.77	2.77	7.69					13.52	16.00
18	18	18	50	71				1.44	1.44	1.44	4.00	5.68				1.65	1.65	1.65	4.57	6.49				14.00	16.00
18	18	18	50	60				1.54	1.54	1.54	4.27	5.12				1.76	1.76	1.76	4.88	5.85				14.00	16.00
18	18	18	50	56				1.58	1.58	1.58	4.38	4.90				1.80	1.80	1.80	5.00	5.60				14.00	16.00

ADMISSIBLE COMBINATION EXAMPLES OF MULTIFLEX INVERTER

Type of INDOOR UNITS CIRCUIT （×100W）								REAL COOLING CAPACITY (OF EACH UNIT IN COMBINATION) Kw								REAL HEATING CAPACITY (OF EACH UNIT IN COMBINATION) kW								kW	
																								TOTAL COOLING CAPACITY	TOTAL HEATING CAPACITY
18	18	18	50	40				1.75	1.75	1.75	4.86	3.89				2.00	2.00	2.00	5.56	4.44				14.00	16.00
18	18	18	50	32				1.85	1.85	1.85	5.15	3.29				2.12	2.12	2.12	5.88	3.76				14.00	16.00
18	18	18	50	25				1.95	1.95	1.95	5.43	2.71				2.23	2.23	2.23	6.20	3.10				14.00	16.00
18	18	18	50	18				2.07	2.07	2.07	5.74	2.07				2.36	2.36	2.36	6.56	2.36				14.00	16.00
18	18	18	40	71				1.53	1.53	1.53	3.39	6.02				1.75	1.75	1.75	3.88	6.88				14.00	16.00
18	18	18	40	60				1.64	1.64	1.64	3.64	5.45				1.87	1.87	1.87	4.16	6.23				14.00	16.00
18	18	18	40	56				1.68	1.68	1.68	3.73	5.23				1.92	1.92	1.92	4.27	5.97				14.00	16.00
18	18	18	40	18				2.25	2.25	2.25	5.00	2.25				2.57	2.57	2.57	5.71	2.57				14.00	16.00
18	18	18	40					2.34	2.34	2.34	5.20					3.06	3.06	3.06	6.81					12.22	16.00
18	18	18	71	18				1.76	1.76	1.76	6.95	1.76				2.01	2.01	2.01	7.94	2.01				14.00	16.00
18	18	18	71					2.02	2.02	2.02	7.95					2.30	2.30	2.30	9.09					14.00	16.00
18	18	18	60	60				1.45	1.45	1.45	4.83	4.83				1.66	1.66	1.66	5.52	5.52				14.00	16.00
18	18	18	60	56				1.48	1.48	1.48	4.94	4.61				1.69	1.69	1.69	5.65	5.27				14.00	16.00
18	18	18	60	40				1.64	1.64	1.64	5.45	3.64				1.87	1.87	1.87	6.23	4.16				14.00	16.00
18	18	18	60	18				1.91	1.91	1.91	6.36	1.91				2.18	2.18	2.18	7.27	2.18				14.00	16.00
18	18	18	60					2.21	2.21	2.21	7.37					2.53	2.53	2.53	8.42					14.00	16.00
18	18	18	56	71				1.39	1.39	1.39	4.33	5.49				1.59	1.59	1.59	4.95	6.28				14.00	16.00
18	18	18	56	25				1.87	1.87	1.87	5.81	2.59				2.13	2.13	2.13	6.64	2.96				14.00	16.00
18	18	18	56	18				1.97	1.97	1.97	6.13	1.97				2.25	2.25	2.25	7.00	2.25				14.00	16.00
18	18	18	56					2.29	2.29	2.29	7.13					2.62	2.62	2.62	8.15					14.00	16.00
18	18	71	60					1.51	1.51	5.95	5.03					1.72	1.72	6.80	5.75					14.00	16.00
18	18	71	56					1.55	1.55	6.10	4.81					1.77	1.77	6.97	5.50					14.00	16.00
18	18	71	50	25				1.38	1.38	5.46	3.85	1.92				1.58	1.58	6.24	4.40	2.20				14.00	16.00
18	18	71	50					1.61	1.61	6.33	4.46					1.83	1.83	7.24	5.10					14.00	16.00
18	18	71	40	32				1.41	1.41	5.55	3.13	2.50				1.61	1.61	6.35	3.58	2.86				14.00	16.00
18	18	71	40	25				1.47	1.47	5.78	3.26	2.03				1.67	1.67	6.60	3.72	2.33				14.00	16.00
18	18	71	40					1.71	1.71	6.76	3.81					1.96	1.96	7.73	4.35					14.00	16.00
18	18	71	32	40				1.41	1.41	5.55	2.50	3.13				1.61	1.61	6.35	2.86	3.58				14.00	16.00

ADMISSIBLE COMBINATION EXAMPLES OF MULTIFLEX INVERTER

Type of INDOOR UNITS CIRCUIT （×100W）								REAL COOLING CAPACITY (OF EACH UNIT IN COMBINATION) Kw								REAL HEATING CAPACITY (OF EACH UNIT IN COMBINATION) kW								kW	
																								TOTAL COOLING CAPACITY	TOTAL HEATING CAPACITY
18	18	71	32	32				1.47	1.47	5.81	2.62	2.62				1.68	1.68	6.64	2.99	2.99				14.00	16.00
18	18	71	32	25				1.54	1.54	6.06	2.73	2.13				1.76	1.76	6.93	3.12	2.44				14.00	16.00
18	18	71	32					1.81	1.81	7.15	3.22					2.07	2.07	8.17	3.68					14.00	16.00
18	18	71	25	25				1.61	1.61	6.33	2.23	2.23				1.83	1.83	7.24	2.55	2.55				14.00	16.00
18	18	71	25					1.91	1.91	7.53	2.65					2.18	2.18	8.61	3.03					14.00	16.00
18	18	71						2.34	2.34	9.23						2.69	2.69	10.40						13.91	15.78
18	18	60	60	25				1.39	1.39	4.64	4.64	1.93				1.59	1.59	5.30	5.30	2.21				14.00	16.00
18	18	60	60					1.62	1.62	5.38	5.38					1.85	1.85	6.15	6.15					14.00	16.00
18	18	60	56	25				1.42	1.42	4.75	4.43	1.98				1.63	1.63	5.42	5.06	2.26				14.00	16.00
18	18	60	56					1.66	1.66	5.53	5.16					1.89	1.89	6.32	5.89					14.00	16.00
18	18	60	50	32				1.42	1.42	4.72	3.93	2.52				1.62	1.62	5.39	4.49	2.88				14.00	16.00
18	18	60	50	25				1.47	1.47	4.91	4.09	2.05				1.68	1.68	5.61	4.68	2.34				14.00	16.00
18	18	60	50					1.73	1.73	5.75	4.79					1.97	1.97	6.58	5.48					14.00	16.00
18	18	60	40	32				1.50	1.50	5.00	3.33	2.67				1.71	1.71	5.71	3.81	3.05				14.00	16.00
18	18	60	40	25				1.57	1.57	5.22	3.48	2.17				1.79	1.79	5.96	3.98	2.48				14.00	16.00
18	18	60	40					1.85	1.85	6.18	4.12					2.12	2.12	7.06	4.71					14.00	16.00
18	18	60	32	32				1.58	1.58	5.25	2.80	2.80				1.80	1.80	6.00	3.20	3.20				14.00	16.00
18	18	60	32	25				1.65	1.65	5.49	2.93	2.29				1.88	1.88	6.27	3.35	2.61				14.00	16.00
18	18	60	32					1.97	1.97	6.56	3.50					2.25	2.25	7.50	4.00					14.00	16.00
18	18	60	25	25				1.73	1.73	5.75	2.40	2.40				1.97	1.97	6.58	2.74	2.74				14.00	16.00
18	18	60	25					2.08	2.08	6.94	2.89					2.38	2.38	7.93	3.31					14.00	16.00
18	18	60						2.34	2.34	7.80						3.00	3.00	9.10						12.48	15.10
18	18	56	56					1.70	1.70	5.30	5.30					1.95	1.95	6.05	6.05					14.00	16.00
18	18	56	50					1.77	1.77	5.52	4.93					2.03	2.03	6.31	5.63					14.00	16.00
18	18	56	40					1.91	1.91	5.94	4.24					2.18	2.18	6.79	4.85					14.00	16.00
18	18	56	32					2.03	2.03	6.32	3.61					2.32	2.32	7.23	4.13					14.00	16.00
18	18	56	25					2.15	2.15	6.70	2.99					2.46	2.46	7.66	3.42					14.00	16.00
18	18	56						2.34	2.34	7.28						3.12	3.12	8.45						11.96	14.69

ADMISSIBLE COMBINATION EXAMPLES OF MULTIFLEX INVERTER

Type of INDOOR UNITS CIRCUIT （×100W）								REAL COOLING CAPACITY (OF EACH UNIT IN COMBINATION) Kw								REAL HEATING CAPACITY (OF EACH UNIT IN COMBINATION) kW								kW	
																								TOTAL COOLING CAPACITY	TOTAL HEATING CAPACITY
18	18	50	50					1.85	1.85	5.15	5.15					2.12	2.12	5.88	5.88					14.00	16.00
18	18	50	40					2.00	2.00	5.56	4.44					2.29	2.29	6.35	5.08					14.00	16.00
18	18	50	32					2.14	2.14	5.93	3.80					2.44	2.44	6.78	4.34					14.00	16.00
18	18	50	25					2.27	2.27	6.31	3.15					2.59	2.59	7.21	3.60					14.00	16.00
18	18	50						2.34	2.34	6.50						3.12	3.12	7.80						11.18	14.04
18	18	40	40					2.17	2.17	4.83	4.83					2.48	2.48	5.52	5.52					14.00	16.00
18	18	40	32					2.33	2.33	5.19	4.15					2.67	2.67	5.93	4.74					14.00	16.00
18	18	40	25					2.34	2.34	5.20	3.25					2.85	2.85	6.34	3.96					13.13	16.00
18	18	40						2.34	2.34	5.20						3.12	3.12	6.50						9.88	12.74
18	18	32	32					2.34	2.34	4.16	4.16					2.88	2.88	5.12	5.12					13.00	16.00
18	18	32	25					2.34	2.34	4.16	3.25					3.10	3.10	5.51	4.30					12.09	16.00
18	18	32						2.34	2.34	4.16						3.12	3.12	5.20						8.84	11.44
18	18	25	25					2.34	2.34	3.25	3.25					3.12	3.12	3.90	3.90					11.18	14.04
18	18	18	18	71	32			1.44	1.44	1.44	1.44	5.68	2.56			1.65	1.65	1.65	1.65	6.49	2.93			14.00	16.00
18	18	18	18	71	25			1.50	1.50	1.50	1.50	5.92	2.08			1.71	1.71	1.71	1.71	6.76	2.38			14.00	16.00
18	18	18	18	71				1.76	1.76	1.76	1.76	6.95				2.01	2.01	2.01	2.01	7.94				14.00	16.00
18	18	18	18	60	50			1.38	1.38	1.38	1.38	4.62	3.85			1.58	1.58	1.58	1.58	5.27	4.40			14.00	16.00
18	18	18	18	60	40			1.47	1.47	1.47	1.47	4.88	3.26			1.67	1.67	1.67	1.67	5.58	3.72			14.00	16.00
18	18	18	18	60	25			1.61	1.61	1.61	1.61	5.35	2.23			1.83	1.83	1.83	1.83	6.11	2.55			14.00	16.00
18	18	18	18	60				1.91	1.91	1.91	1.91	6.36				2.18	2.18	2.18	2.18	7.27				14.00	16.00
18	18	18	18	56	50			1.42	1.42	1.42	1.42	4.40	3.93			1.62	1.62	1.62	1.62	5.03	4.49			14.00	16.00
18	18	18	18	56	40			1.50	1.50	1.50	1.50	4.67	3.33			1.71	1.71	1.71	1.71	5.33	3.81			14.00	16.00
18	18	18	18	56	25			1.65	1.65	1.65	1.65	5.12	2.29			1.88	1.88	1.88	1.88	5.86	2.61			14.00	16.00
18	18	18	18	50	50			1.47	1.47	1.47	1.47	4.07	4.07			1.67	1.67	1.67	1.67	4.65	4.65			14.00	16.00
18	18	18	18	50				2.07	2.07	2.07	2.07	5.74				2.36	2.36	2.36	2.36	6.56				14.00	16.00
18	18	18	18	40	40			1.66	1.66	1.66	1.66	3.68	3.68			1.89	1.89	1.89	1.89	4.21	4.21			14.00	16.00
18	18	18	18	32				2.42	2.42	2.42	2.42	4.31				2.77	2.77	2.77	2.77	4.92				14.00	16.00
18	18	18	18	32	32			1.85	1.85	1.85	1.85	3.29	3.29			2.12	2.12	2.12	2.12	3.76	3.76			14.00	16.00

ADMISSIBLE COMBINATION EXAMPLES OF MULTIFLEX INVERTER

Type of INDOOR UNITS CIRCUIT （×100W）								REAL COOLING CAPACITY (OF EACH UNIT IN COMBINATION) Kw								REAL HEATING CAPACITY (OF EACH UNIT IN COMBINATION) kW								kW	
																								TOTAL COOLING CAPACITY	TOTAL HEATING CAPACITY
18	18	18	18	25	25			2.07	2.07	2.07	2.07	2.87	2.87			2.36	2.36	2.36	2.36	3.28	3.28			14.00	16.00
18	18	18	18	18				2.34	2.34	2.34	2.34	2.34				3.12	3.12	3.12	3.12	3.12				11.70	15.60
18	18	18	32					2.34	2.34	2.34	4.16					3.12	3.12	3.12	5.20					11.18	14.56
18	18	18	25					2.34	2.34	2.34	3.25					3.12	3.12	3.12	3.90					10.27	13.26
18	18	18	18					2.34	2.34	2.34	2.34					3.12	3.12	3.12	3.12					9.36	12.48
25	25	25	25	25	25	25		2.00	2.00	2.00	2.00	2.00	2.00	2.00		2.29	2.29	2.29	2.29	2.29	2.29	2.29		14.00	16.00
25	25	25	25	25	25	18		2.08	2.08	2.08	2.08	2.08	2.08	1.50		2.38	2.38	2.38	2.38	2.38	2.38	1.71		14.00	16.00
25	25	25	25	25	40	18		1.91	1.91	1.91	1.91	1.91	3.06	1.38		2.19	2.19	2.19	2.19	2.19	3.50	1.57		14.00	16.00
25	25	25	25	25	40			2.12	2.12	2.12	2.12	2.12	3.39			2.42	2.42	2.42	2.42	2.42	3.88			14.00	16.00
25	25	25	25	25	32			2.23	2.23	2.23	2.23	2.23	2.85			2.55	2.55	2.55	2.55	2.55	3.26			14.00	16.00
25	25	25	25	25	32	18		2.00	2.00	2.00	2.00	2.00	2.56	1.44		2.29	2.29	2.29	2.29	2.29	2.93	1.65		14.00	16.00
25	25	25	25	25	25			2.33	2.33	2.33	2.33	2.33	2.33			2.67	2.67	2.67	2.67	2.67	2.67			14.00	16.00
25	25	25	25	25	18	18		2.17	2.17	2.17	2.17	2.17	1.57	1.57		2.48	2.48	2.48	2.48	2.48	1.79	1.79		14.00	16.00
25	25	25	25	25	18			2.45	2.45	2.45	2.45	2.45	1.76			2.80	2.80	2.80	2.80	2.80	2.01			14.00	16.00
25	25	25	25	40	40			1.94	1.94	1.94	1.94	3.11	3.11			2.22	2.22	2.22	2.22	3.56	3.56			14.00	16.00
25	25	25	25	40	32			2.03	2.03	2.03	2.03	3.26	2.60			2.33	2.33	2.33	2.33	3.72	2.98			14.00	16.00
25	25	25	25	40	18	18		1.99	1.99	1.99	1.99	3.18	1.43	1.43		2.27	2.27	2.27	2.27	3.64	1.64	1.64		14.00	16.00
25	25	25	25	40	18			2.22	2.22	2.22	2.22	3.54	1.59			2.53	2.53	2.53	2.53	4.05	1.82			14.00	16.00
25	25	25	25	40				2.50	2.50	2.50	2.50	4.00				2.86	2.86	2.86	2.86	4.57				14.00	16.00
25	25	25	25	32	50			1.92	1.92	1.92	1.92	2.46	3.85			2.20	2.20	2.20	2.20	2.81	4.40			14.00	16.00
25	25	25	25	32	32			2.13	2.13	2.13	2.13	2.73	2.73			2.44	2.44	2.44	2.44	3.12	3.12			14.00	16.00
25	25	25	25	32	18			2.33	2.33	2.33	2.33	2.99	1.68			2.67	2.67	2.67	2.67	3.41	1.92			14.00	16.00
25	25	25	25	32				2.65	2.65	2.65	2.65	3.39				3.03	3.03	3.03	3.03	3.88				14.00	16.00
25	25	25	25	25	56			1.93	1.93	1.93	1.93	1.93	4.33			2.21	2.21	2.21	2.21	2.21	4.95			14.00	16.00
25	25	25	25	25	50			2.00	2.00	2.00	2.00	2.00	4.00			2.29	2.29	2.29	2.29	2.29	4.57			14.00	16.00
25	25	25	25	18				2.97	2.97	2.97	2.97	2.14				3.39	3.39	3.39	3.39	2.44				14.00	16.00
25	25	25	71	32				1.97	1.97	1.97	5.58	2.52				2.25	2.25	2.25	6.38	2.88				14.00	16.00
25	25	25	71	25				2.05	2.05	2.05	5.81	2.05				2.34	2.34	2.34	6.64	2.34				14.00	16.00
25	25	25	71	18	18			1.92	1.92	1.92	5.46	1.38	1.38			2.20	2.20	2.20	6.24	1.58	1.58			14.00	16.00
25	25	25	71	18				2.13	2.13	2.13	6.06	1.54				2.44	2.44	2.44	6.93	1.76				14.00	16.00
25	25	25	71					2.40	2.40	2.40	6.81					2.74	2.74	2.74	7.78					14.00	16.00
25	25	25	60	40				2.00	2.00	2.00	4.80	3.20				2.29	2.29	2.29	5.49	3.66				14.00	16.00

ADMISSIBLE COMBINATION EXAMPLES OF MULTIFLEX INVERTER

Type of INDOOR UNITS CIRCUIT （×100W）								REAL COOLING CAPACITY (OF EACH UNIT IN COMBINATION) Kw								REAL HEATING CAPACITY (OF EACH UNIT IN COMBINATION) kW								kW	
																								TOTAL COOLING CAPACITY	TOTAL HEATING CAPACITY
25	25	25	60	32				2.10	2.10	2.10	5.03	2.68				2.40	2.40	2.40	5.75	3.07				14.00	16.00
25	25	25	60	25	18			1.97	1.97	1.97	4.72	1.97	1.42			2.25	2.25	2.25	5.39	2.25	1.62			14.00	16.00
25	25	25	60	25				2.19	2.19	2.19	5.25	2.19				2.50	2.50	2.50	6.00	2.50				14.00	16.00
25	25	25	60	18				2.29	2.29	2.29	5.49	1.65				2.61	2.61	2.61	6.27	1.88				14.00	16.00
25	25	25	60					2.59	2.59	2.59	6.22					2.96	2.96	2.96	7.11					14.00	16.00
25	25	25	56	50				1.93	1.93	1.93	4.33	3.87				2.21	2.21	2.21	4.95	4.42				14.00	16.00
25	25	25	56	40				2.05	2.05	2.05	4.58	3.27				2.34	2.34	2.34	5.24	3.74				14.00	16.00
25	25	25	56	32	18			1.93	1.93	1.93	4.33	2.48	1.39			2.21	2.21	2.21	4.95	2.83	1.59			14.00	16.00
25	25	25	56	32				2.15	2.15	2.15	4.81	2.75				2.45	2.45	2.45	5.50	3.14				14.00	16.00
25	25	25	56	25	18			2.01	2.01	2.01	4.51	2.01	1.45			2.30	2.30	2.30	5.15	2.30	1.66			14.00	16.00
25	25	25	56	18	18			2.10	2.10	2.10	4.69	1.51	1.51			2.40	2.40	2.40	5.37	1.72	1.72			14.00	16.00
25	25	25	56	18				2.35	2.35	2.35	5.26	1.69				2.68	2.68	2.68	6.01	1.93				14.00	16.00
25	25	25	56					2.67	2.67	2.67	5.98					3.05	3.05	3.05	6.84					14.00	16.00
25	25	25	50	50				2.00	2.00	2.00	4.00	4.00				2.29	2.29	2.29	4.57	4.57				14.00	16.00
25	25	25	50	40				2.12	2.12	2.12	4.24	3.39				2.42	2.42	2.42	4.85	3.88				14.00	16.00
25	25	25	50	32	18			2.00	2.00	2.00	4.00	2.56	1.44			2.29	2.29	2.29	4.57	2.93	1.65			14.00	16.00
25	25	25	50	32				2.23	2.23	2.23	4.46	2.85				2.55	2.55	2.55	5.10	3.26				14.00	16.00
25	25	25	50	25				2.33	2.33	2.33	4.67	2.33				2.67	2.67	2.67	5.33	2.67				14.00	16.00
25	25	25	50	18				2.45	2.45	2.45	4.90	1.76				2.80	2.80	2.80	5.59	2.01				14.00	16.00
25	25	25	50					2.80	2.80	2.80	5.60					3.20	3.20	3.20	6.40					14.00	16.00
25	25	25	40	40				2.26	2.26	2.26	3.61	3.61				2.58	2.58	2.58	4.13	4.13				14.00	16.00
25	25	25	40	32				2.38	2.38	2.38	3.81	3.05				2.72	2.72	2.72	4.35	3.48				14.00	16.00
25	25	25	40	25				2.50	2.50	2.50	4.00	2.50				2.86	2.86	2.86	4.57	2.86				14.00	16.00
25	25	25	40					3.04	3.04	3.04	4.87					3.48	3.48	3.48	5.57					14.00	16.00
25	25	25	32	32				2.52	2.52	2.52	3.22	3.22				2.88	2.88	2.88	3.68	3.68				14.00	16.00
25	25	25	32	18				2.80	2.80	2.80	3.58	2.02				3.20	3.20	3.20	4.10	2.30				14.00	16.00
25	25	25	32					3.25	3.25	3.25	4.16					3.74	3.74	3.74	4.79					13.91	16.00
25	25	25	25					3.25	3.25	3.25	3.25					3.90	3.90	3.90	3.90					13.00	15.60
25	25	25	18					3.25	3.25	3.25	2.34					3.90	3.90	3.90	3.10					12.09	14.80
25	25	40						3.25	3.25	5.20						3.90	3.90	6.50						11.70	14.30
25	25	32						3.25	3.25	4.16						3.90	3.90	5.20						10.66	13.00
25	25	25						3.25	3.25	3.25						3.90	3.90	3.90						9.75	11.70
32	32	32	32	32	18			2.52	2.52	2.52	2.52	2.52	1.42			2.88	2.88	2.88	2.88	2.88	1.62			14.00	16.00

ADMISSIBLE COMBINATION EXAMPLES OF MULTIFLEX INVERTER

Type of INDOOR UNITS CIRCUIT （×100W）								REAL COOLING CAPACITY (OF EACH UNIT IN COMBINATION) Kw								REAL HEATING CAPACITY (OF EACH UNIT IN COMBINATION) kW								kW	
																								TOTAL COOLING CAPACITY	TOTAL HEATING CAPACITY
32	32	32	32	50				2.52	2.52	2.52	2.52	3.93				2.88	2.88	2.88	2.88	4.49				14.00	16.00
32	32	32	32	40				2.67	2.67	2.67	2.67	3.33				3.05	3.05	3.05	3.05	3.81				14.00	16.00
32	32	32	32	32				2.80	2.80	2.80	2.80	2.80				3.20	3.20	3.20	3.20	3.20				14.00	16.00
32	32	32	32	25				2.93	2.93	2.93	2.93	2.29				3.35	3.35	3.35	3.35	2.61				14.00	16.00
32	32	32	32	18				3.07	3.07	3.07	3.07	1.73				3.51	3.51	3.51	3.51	1.97				14.00	16.00
32	32	32	50					3.07	3.07	3.07	4.79					3.51	3.51	3.51	5.48					14.00	16.00
32	32	32	40					3.29	3.29	3.29	4.12					3.76	3.76	3.76	4.71					14.00	16.00
32	32	32	32					3.50	3.50	3.50	3.50					4.00	4.00	4.00	4.00					14.00	16.00
32	32	32	25					3.70	3.70	3.70	2.89					4.23	4.23	4.23	3.31					14.00	16.00
32	32	32	18					3.93	3.93	3.93	2.21					4.49	4.49	4.49	2.53					14.00	16.00
32	32	50						3.93	3.93	6.14						4.49	4.49	7.02						14.00	16.00
32	32	40						4.16	4.16	5.20						4.92	4.92	6.15						13.52	16.00
32	32	32						4.16	4.16	4.16						5.20	5.20	5.20						12.48	15.60
32	32	25						4.16	4.16	3.25						5.20	5.20	3.90						11.57	14.30
32	32	18						4.16	4.16	2.34						5.20	5.20	3.12						10.66	13.52
40	40	40	40	18				3.15	3.15	3.15	3.15	1.42				3.60	3.60	3.60	3.60	1.62				14.00	16.00
40	40	40	56					3.18	3.18	3.18	4.45					3.64	3.64	3.64	5.09					14.00	16.00
40	40	40	50					3.29	3.29	3.29	4.12					3.76	3.76	3.76	4.71					14.00	16.00
40	40	40	40					3.50	3.50	3.50	3.50					4.00	4.00	4.00	4.00					14.00	16.00
40	40	40	32					3.68	3.68	3.68	2.95					4.21	4.21	4.21	3.37					14.00	16.00
40	40	40	25					3.86	3.86	3.86	2.41					4.41	4.41	4.41	2.76					14.00	16.00
40	40	40	18					4.06	4.06	4.06	1.83					4.64	4.64	4.64	2.09					14.00	16.00
40	40	56						4.12	4.12	5.76						4.71	4.71	6.59						14.00	16.00
40	40	50						4.31	4.31	5.38						4.92	4.92	6.15						14.00	16.00
40	40	40						4.67	4.67	4.67						5.33	5.33	5.33						14.00	16.00
40	40	32						5.00	5.00	4.00						5.71	5.71	4.57						14.00	16.00
40	40	25						5.20	5.20	3.25						6.10	6.10	3.81						13.65	16.00
40	40	18						5.20	5.20	2.34						6.50	6.50	2.94						12.74	15.94
40	56							5.20	7.28							6.50	8.45							12.48	14.95
40	50							5.20	6.50							6.50	7.80							11.70	14.30
40	40							5.20	5.20							6.50	6.50							10.40	13.00
40	32							5.20	4.16							6.50	5.20							9.36	11.70
50	50	50	25					4.00	4.00	4.00	2.00					4.57	4.57	4.57	2.29					14.00	16.00

ADMISSIBLE COMBINATION EXAMPLES OF MULTIFLEX INVERTER

Type of INDOOR UNITS CIRCUIT （×100W）								REAL COOLING CAPACITY (OF EACH UNIT IN COMBINATION) Kw								REAL HEATING CAPACITY (OF EACH UNIT IN COMBINATION) kW								kW	
																								TOTAL COOLING CAPACITY	TOTAL HEATING CAPACITY
50	50	50	18					4.17	4.17	4.17	1.50					4.76	4.76	4.76	1.71					14.00	16.00
50	50	60						4.38	4.38	5.25						5.00	5.00	6.00						14.00	16.00
50	50	56						4.49	4.49	5.03						5.13	5.13	5.74						14.00	16.00
50	50	50						4.67	4.67	4.67						5.33	5.33	5.33						14.00	16.00
50	50	40						5.00	5.00	4.00						5.71	5.71	4.57						14.00	16.00
50	50	32						5.30	5.30	3.39						6.06	6.06	3.88						14.00	16.00
50	50	25						5.60	5.60	2.80						6.40	6.40	3.20						14.00	16.00
50	50	18						5.93	5.93	2.14						6.78	6.78	2.44						14.00	16.00
50	60							6.36	7.64							7.27	8.73							14.00	16.00
50	56							6.50	7.28							7.55	8.45							13.78	16.00
50	50							6.50	6.50							7.80	7.80							13.00	15.60
50	40							6.50	5.20							7.80	6.50							11.70	14.30
50	32							6.50	4.16							7.80	5.20							10.66	13.00
50	25							6.50	3.25							7.80	3.90							9.75	11.70
56	56	56						4.67	4.67	4.67						5.33	5.33	5.33						14.00	16.00
56	56	50						4.84	4.84	4.32						5.53	5.53	4.94						14.00	16.00
56	56	40						5.16	5.16	3.68						5.89	5.89	4.21						14.00	16.00
56	56	32						5.44	5.44	3.11						6.22	6.22	3.56						14.00	16.00
56	56	25						5.72	5.72	2.55						6.54	6.54	2.92						14.00	16.00
56	56	18						6.03	6.03	1.94						6.89	6.89	2.22						14.00	16.00
56	71							6.17	7.83							7.06	8.94							14.00	16.00
56	60							6.76	7.24							7.72	8.28							14.00	16.00
56	56							7.00	7.00							8.00	8.00							14.00	16.00
56	50							7.28	6.50							8.45	7.55							13.78	16.00
56	40							7.28	5.20							8.45	6.50							12.48	14.95
56	32							7.28	4.16							8.45	5.20							11.44	13.65
56	25							7.28	3.25							8.45	3.90							10.53	12.35
56	18							7.28	2.34							8.45	3.12							9.62	11.57
60	60	60						4.67	4.67	4.67						5.33	5.33	5.33						14.00	16.00
60	60	56						4.77	4.77	4.45						5.45	5.45	5.09						14.00	16.00
60	60	50						4.94	4.94	4.12						5.65	5.65	4.71						14.00	16.00
60	60	40						5.25	5.25	3.50						6.00	6.00	4.00						14.00	16.00
60	60	32						5.53	5.53	2.95						6.32	6.32	3.37						14.00	16.00

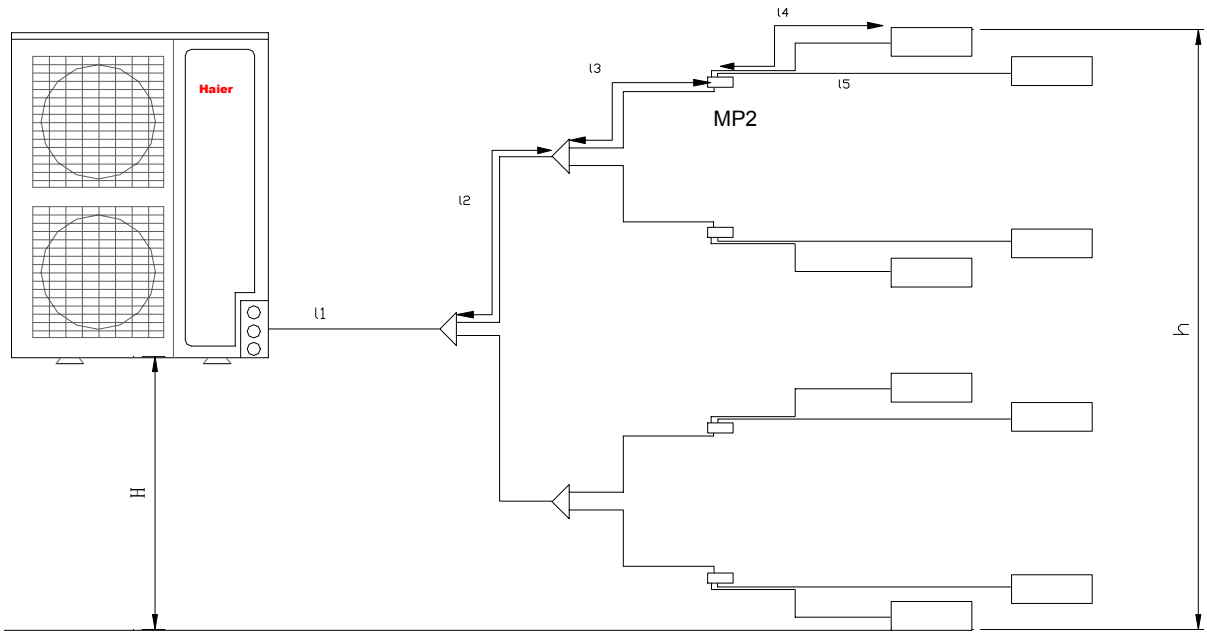
ADMISSIBLE COMBINATION EXAMPLES OF MULTIFLEX INVERTER

Type of INDOOR UNITS CIRCUIT （×100W）								REAL COOLING CAPACITY (OF EACH UNIT IN COMBINATION) Kw								REAL HEATING CAPACITY (OF EACH UNIT IN COMBINATION) kW								kW	
																								TOTAL COOLING CAPACITY	TOTAL HEATING CAPACITY
60	60	25						5.79	5.79	2.41						6.62	6.62	2.76						14.00	16.00
60	60	18						6.09	6.09	1.83						6.96	6.96	2.09						14.00	16.00
60	71							6.41	7.59							7.33	8.67							14.00	16.00
60	60							7.00	7.00							8.00	8.00							14.00	16.00
60	56							7.24	6.76							8.28	7.72							14.00	16.00
60	50							7.64	6.36							8.73	7.27							14.00	16.00
60	40							7.80	5.20							9.10	6.40							13.00	15.50
60	32							7.80	4.16							9.10	5.57							11.96	14.67
60	25							7.80	3.25							9.10	3.90							11.05	13.00
60	18							7.80	2.34							9.10	3.12							10.14	12.22
71	71	40						5.46	5.46	3.08						6.24	6.24	3.52						14.00	16.00
71	71	32						5.71	5.71	2.57						6.53	6.53	2.94						14.00	16.00
71	71	25						5.95	5.95	2.10						6.80	6.80	2.40						14.00	16.00
71	71	18						6.21	6.21	1.58						7.10	7.10	1.80						14.00	16.00
71	71							7.00	7.00							8.00	8.00							14.00	16.00
71	60	50						5.49	4.64	3.87						6.28	5.30	4.42						14.00	16.00
71	60	40						5.81	4.91	3.27						6.64	5.61	3.74						14.00	16.00
71	60	32						6.10	5.15	2.75						6.97	5.89	3.14						14.00	16.00
71	60	25						6.37	5.38	2.24						7.28	6.15	2.56						14.00	16.00
71	60	18						6.67	5.64	1.69						7.62	6.44	1.93						14.00	16.00
71	60							7.59	6.41							8.67	7.33							14.00	16.00
71	56	50						5.62	4.43	3.95						6.42	5.06	4.52						14.00	16.00
71	56	40						5.95	4.69	3.35						6.80	5.37	3.83						14.00	16.00
71	56	32						6.25	4.93	2.82						7.14	5.64	3.22						14.00	16.00
71	56	25						6.54	5.16	2.30						7.47	5.89	2.63						14.00	16.00
71	56	18						6.86	5.41	1.74						7.83	6.18	1.99						14.00	16.00
71	56							7.83	6.17							8.94	7.06							14.00	16.00
71	50	50						5.81	4.09	4.09						6.64	4.68	4.68						14.00	16.00
71	50	40						6.17	4.35	3.48						7.06	4.97	3.98						14.00	16.00
71	50	32						6.50	4.58	2.93						7.42	5.23	3.35						14.00	16.00
71	50	25						6.81	4.79	2.40						7.78	5.48	2.74						14.00	16.00
71	50	18						7.15	5.04	1.81						8.17	5.76	2.07						14.00	16.00
71	50							8.21	5.79							9.39	6.61							14.00	16.00

ADMISSIBLE COMBINATION EXAMPLES OF MULTIFLEX INVERTER

Type of INDOOR UNITS CIRCUIT （×100W）								REAL COOLING CAPACITY (OF EACH UNIT IN COMBINATION) Kw								REAL HEATING CAPACITY (OF EACH UNIT IN COMBINATION) kW								kW	
																								TOTAL COOLING CAPACITY	TOTAL HEATING CAPACITY
71	40	40						6.58	3.71	3.71						7.52	4.24	4.24						14.00	16.00
71	40	32						6.95	3.92	3.13						7.94	4.48	3.58						14.00	16.00
71	40	25						7.31	4.12	2.57						8.35	4.71	2.94						14.00	16.00
71	40	18						7.71	4.34	1.95						8.81	4.96	2.23						14.00	16.00
71	40							8.95	5.05							10.23	5.77							14.00	16.00
71	32	32						7.36	3.32	3.32						8.41	3.79	3.79						14.00	16.00
71	32	25						7.77	3.50	2.73						8.88	4.00	3.13						14.00	16.00
71	32	18						8.21	3.70	2.08						9.39	4.23	2.38						14.00	16.00
71	32							9.23	4.16							10.40	4.97							13.39	15.37
71	25	25						8.21	2.89	2.89						9.39	3.31	3.31						14.00	16.00
71	25	18						8.72	3.07	2.21						9.96	3.51	2.53						14.00	16.00
71	25							9.23	3.25							10.40	3.90							12.48	14.30
71	18	18						9.23	2.34	2.34						10.40	2.69	2.69						13.91	15.78
71	18							9.23	2.34							10.40	3.12							11.57	13.52
71								9.23								10.40								9.23	10.40

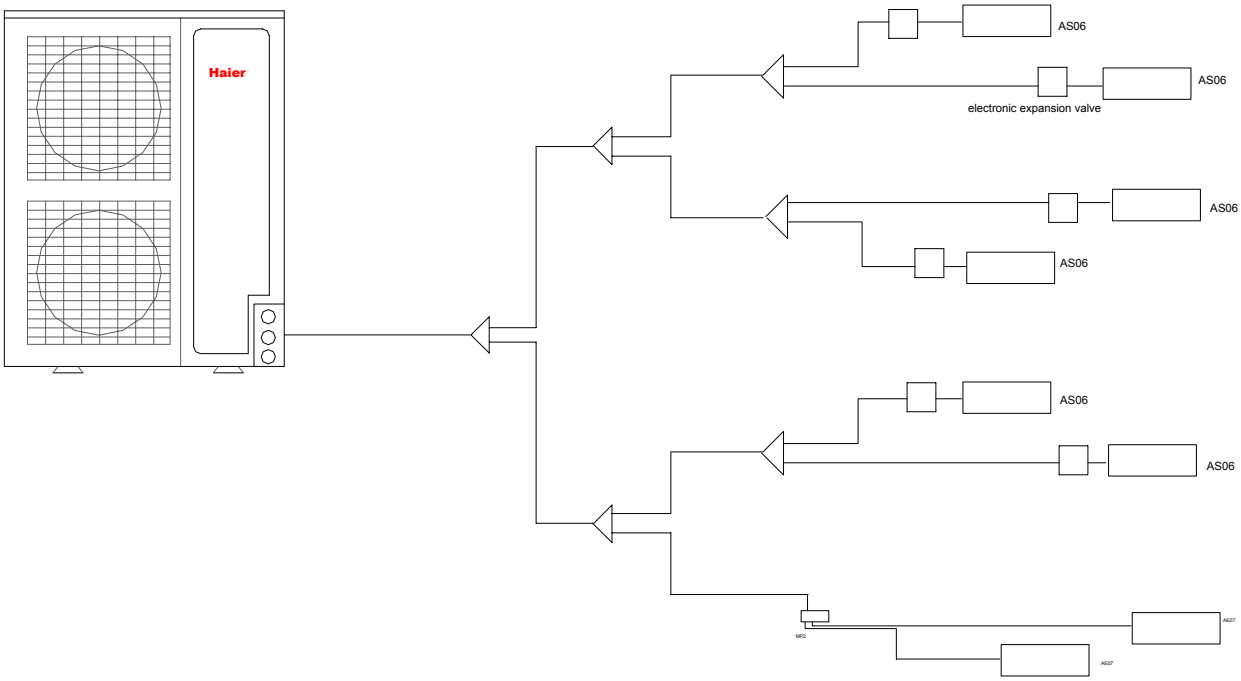
8.3 Piping length and drop between units



1) When connected with 8 units,indoor units refer to <admissible combination examples>
2) Total length=l1+l2*2+l3*4+l4*4+l5*4<=100m
3) Max. piping length =(l1+l2+l3+l5)<=70m
4) Max. piping length between the indoor unit and the first branch pipe<=30m
5) Max. drop between outdoor unit and indoor unit: H<=30m(indoor above outdoor);H<=20m(indoor below outdoor)
6) Max. drop between the two indoor units : h<=10m
7) Expansion valve is less than 15m to its corresponding indoor unit
8) Only wall mounted types are connected with expansion valves.
9) The expansion valves of different indoor models are different.
10)The first branch pipe must use FQG-180,the others use less than it.

Combination example:

8 by 1:



NOTE:

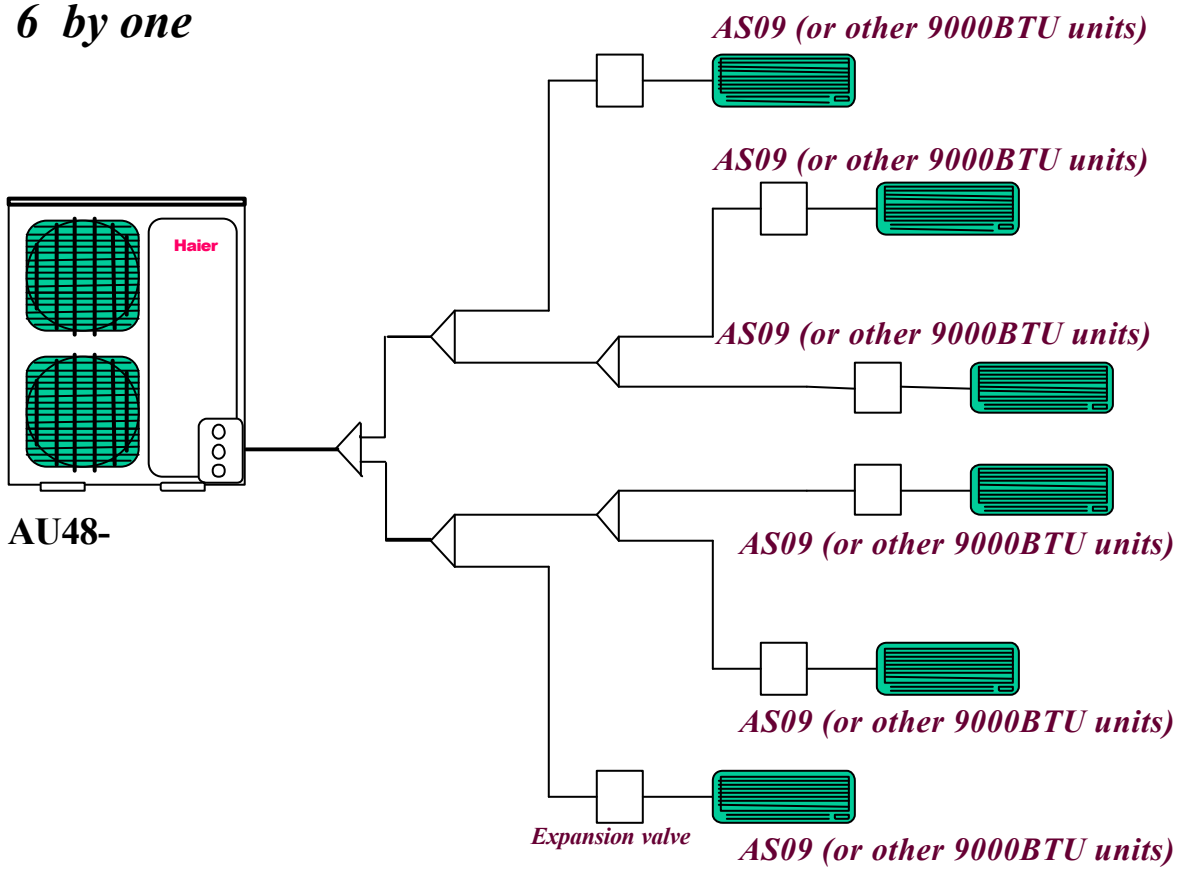
1.When AU48 unit is connected with 8 indoor units, pay attention that the total capacity of indoor units must not exceed 130% of outdoor cooling capacity.

2.Wall-mounted type can be connected with 8 units by the outdoor unit. You can set the unit address with the new address setting controller (ASC-02). Its usage is in the following.

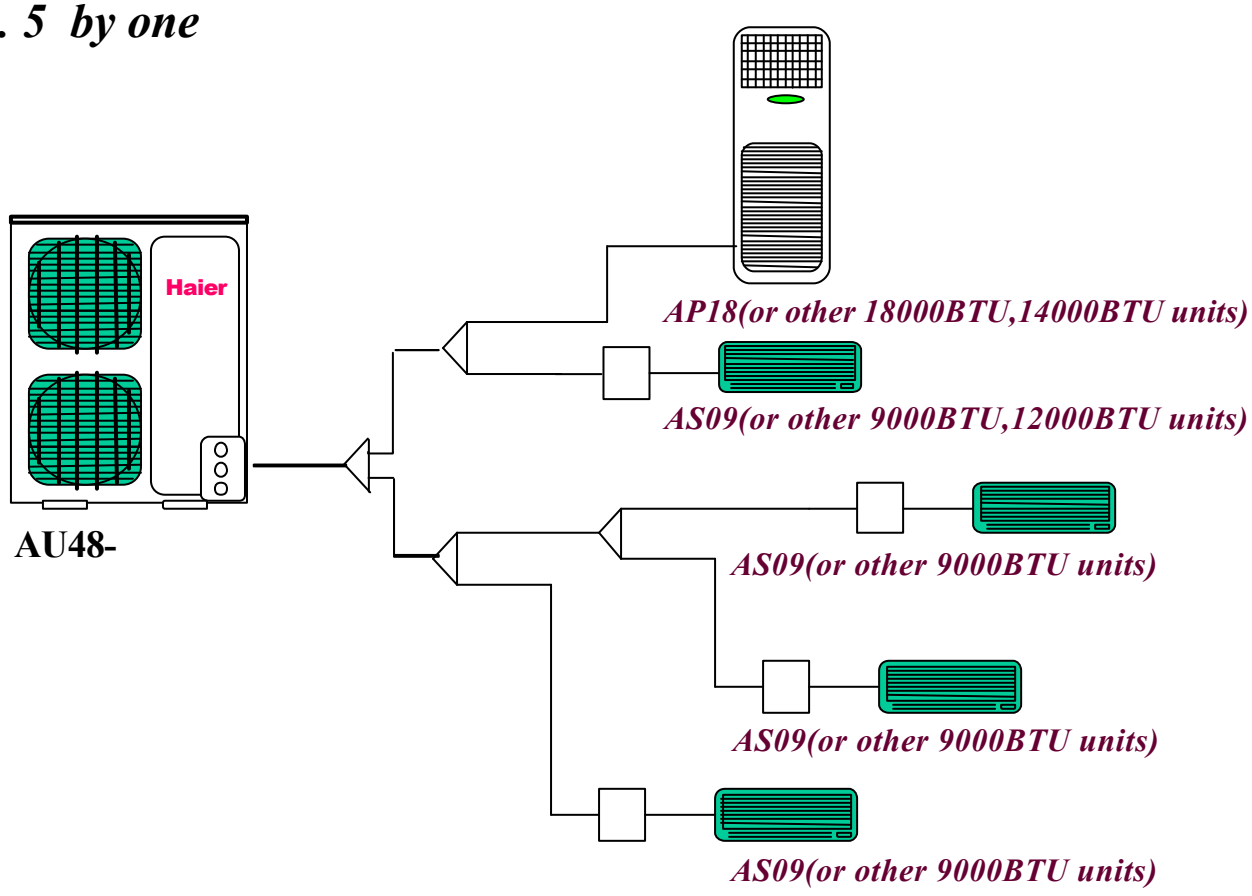
3.When outdoor unit connects with ceiling concealed units, please set address of ceiling concealed type with dialing switches.

8.4 Combination examples

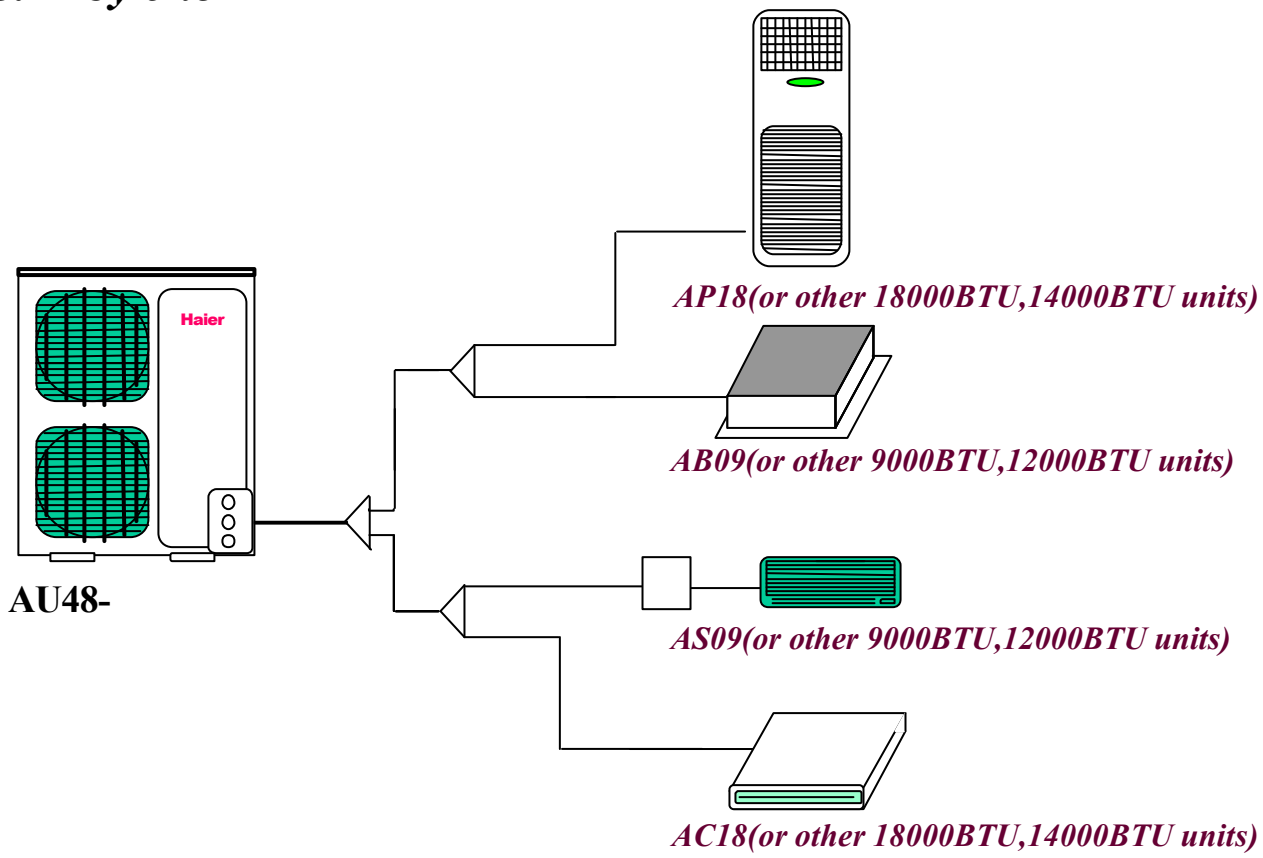
A. 6 by one



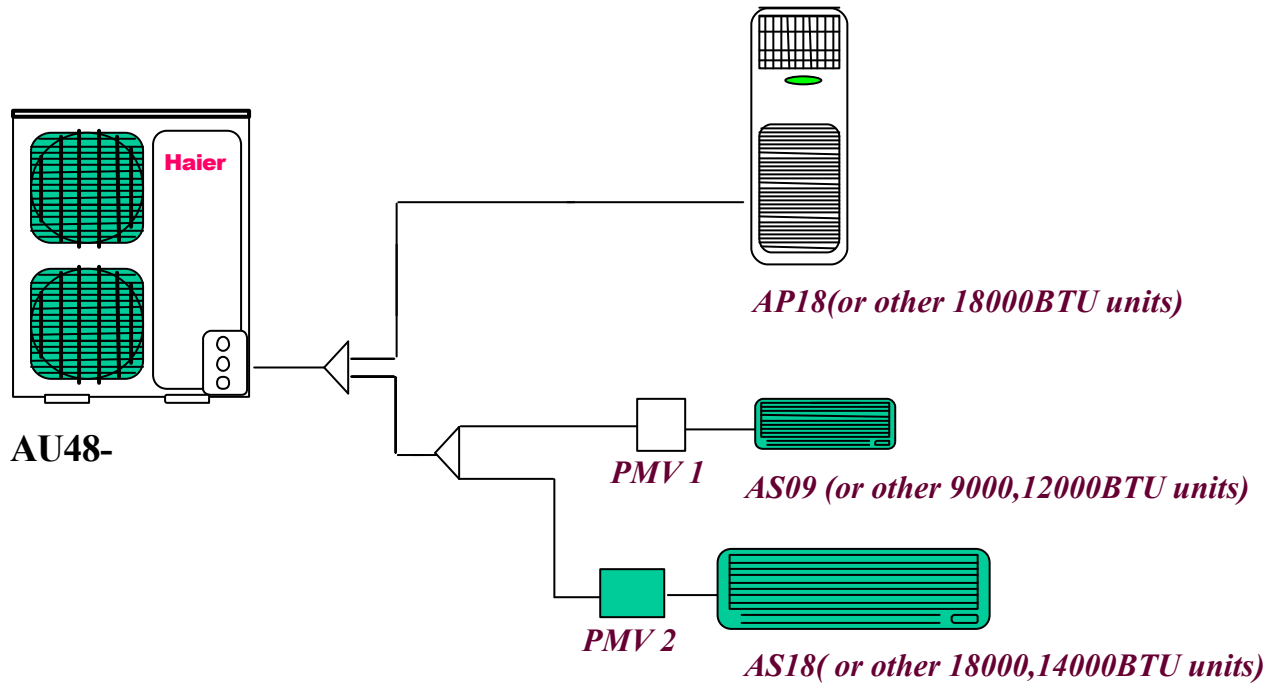
B. 5 by one



C. 4 by one



D. 3 by one



8.6 The Order of Installation Work

Item	Work	Main points
Before installation	Work division	-to ascertain the person responsible for installation of pipes and wiring
	Make installation diagram	-to ascertain the pipe installation dimension and position of electronic expansion valve, to make control wiring system diagram
Work	Installation of indoor and outdoor unit	-to prevent the ventilation from short circuit and guarantee repair space
	Refrigerant pipe work	-Pay attention to dry, clean and seal
	Drain pipe work	-Slant downward
	Heat insulation work	-No gaps in the joint of heat insulation material
	Wiring work (control wire, power cord)	-Choose the proper wire and cord
	Set every set switch	-Should be complied with control wiring system diagram
	Airtight test	-Close all the gas, liquid valves
	Vacuum drying	-Should the vacuum pump that can reach 200Pa vacuity
	Additional refrigerant	-Write down the additional refrigerant amount on the outdoor unit body and record table
	Test run adjustment	-Do test run to indoor unit one by one to verify if there is wrong pipes
	Training of use and maintenance	-Explain to user, simultaneously provide all the documents

The above work order is general knowledge, they may be changed to be complied with the specific work site.

8.7 Attentive matters of safety

- Before installing, do read this [Attentive matters of safety] carefully to guarantee the proper installation.
- The below attentive matters are divided into [warning] and [note] two parts. When the wrong installation occur, it is very possible death and severe injury and other serious accidents will happen. For those items are listed in [warning] part. But even the items listed in [note] part can also cause serious accidents. Above all, both the two parts are very important contents related to safety, so they must be obeyed.
- After installation, do test run to verify everything is normal, after that please explains the use method and maintenance method to the user according to the operation manual. Additionally, give the installation manual together with operation manual to the user and ask them to keep them properly.

Warning

- The distributing shop, where you bought the air conditioner, or the specified shops shall do the installation work. If you do the installation work by yourself, the improper installation will cause water leakage, electric shock fire and other accidents.
- The installation work shall be in line with what the installation manual specified. If installation is not proper, water leakage, electric shock, fire and other accidents will occur.
- Install the air conditioner to a place where can definitely stand its weight. Places not firm enough will cause drop down of unit resulting in body hurt.
- The installation work shall be preventive to typhoon and earthquake. If the installation

work is not met with the requirements, overturn of the unit will occur resulting in accidents.

- The wiring work shall be done by a qualified person and referred to the "technical standard of electric equipment", "indoor wiring regulation" and what the manual specified. Do use special circuit. If the capacity of the circuit is not enough or bad work, electric shock, fire and other accidents will happen.
- Using the specified cable to do wiring work and connecting firmly and properly. Fix the connecting part of the terminals to prevent it from the external force. Improper connection and fixing will cause heating and fire etc. accidents.
- Wiring shall be kept in correct shape avoiding extrusion. After installation, the electric box cover and the external panel shall not nip the wire. Improper installation will cause heating and fire etc. accidents.
- When setting or moving the air conditioner do not let the air and things alike get into the refrigeration system except the specified refrigerant (R22). If air and other things enter, abnormal high pressure will occur, which easily cause break and body injuries etc. accidents.
- When installing, do use the accessories or specified parts. If not using the parts specified by our company, water leakage, electric shock, fire and refrigerant leakage will occur.
- Do not lead the drainpipe to drain where the sulfur gas may be involved. Otherwise, the poisonous gas will enter into the indoor.
- During installation, if refrigerant leakage occurs, do the ventilation work immediately. As soon as the refrigerant gas meets fire, poisonous gas will be produce. If the refrigerant gas enters into room and meet the air blowing heater, heater or stove etc. fire source, the poisonous gas may be produced. After installation, confirm there is no leakage of refrigerant.
- Do not install the unit in a place where the combustible gas may be leaked. In any case the combustible gas leaks and accumulated around the unit, fire accident will occur.
- Do heat insulation work to the refrigerant gas pipes and liquid pipes to reach the purpose of heat preservation. If the heat insulation measure is not sufficient, water generated by condensing dew will drip leading to wet the floor and indoor articles.
- Do not damage the power line or change it arbitrarily to avoid occurrence of fire or electric shock.
- Do not extend the power line or using other electric appliance in the same power receptacle to avoid fire or electric shock.

Note

- Do grounding work. Do not connect the grounding wire to gas pipe, tap, lighting rod or telephone line. Improper grounding will cause electric shock.
- In some places the electric leakage breaker shall be installed. If do not install the breaker, electric shock may occur.
- After installation, power on to do electric leakage detecting test.

8.8 Special Work and Main Points in Installation

Warning

● During installation, if refrigerant leakage occurs, take ventilation measurement immediately. ● As soon as the leaked refrigerant gas meets fire, poisonous gas will generate.	● After finishing installation, confirm the refrigerant gas does not leak. ● If the refrigerant gas leaks in the room, once it meets heater, burner and gas stove etc. fire source, the poisonous gas will generate.

A. Choosing of pipes

According to the following indoor unit and outdoor unit installation diagram to choose the material and size of pipes and branch pipes.

B. Connection of pipes

1 Method of pipe connection

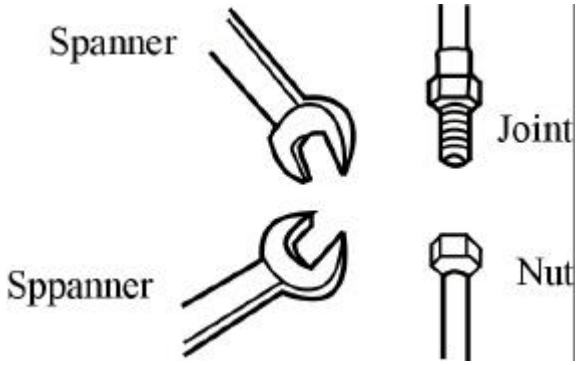
a. The pipe shall be as short as possible to guarantee efficiency.

b. Daub the refrigerant oil on the connection and flare nut.

c. When bending the pipes, give the roundness as large as possible, to avoid crashing the pipes.

d. To connect the pipe, fit the center and screw the nut with hand, then use spanner or torque wrench to tighten it. The fastening torque as shown in below table. As shown in figure.

e. Be careful alien matters, such as sands, water etc. shall not enter the pipes.



Forced fastening without careful centering may damage the threads and cause gas

2. Welding of pipes

a. In welding, the nitrogen shall be used to avoid oxidation of the pipe inner part.

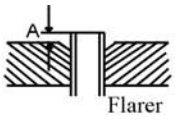
b. The refrigerating pipe shall use clean new pipes. When working, it shall take steps to prevent water and dust from entering.

c. When loosening and tightening the nuts, two spanners shall be used. If using one spanner, it can not reach the desired degree of tightness.

Using the specified fastening torque to fasten nuts.

Pipe diameter (mm)	Installation torque (N.M.)	Fastening torque (N.M.)
6.35	11.8 (1.2kgf.m)	13.7 (1.4kgf.m)
9.52	24.5 (2.5kgf.m)	29.4 (3.0kgf.m)
12.7	49.0 (5.0kgf.m)	53.9 (5.5kgf.m)
15.88	78.4 (8.0kgf.m)	98.0 (10.0kgf.m)

3.Method of cutting and flaring pipe

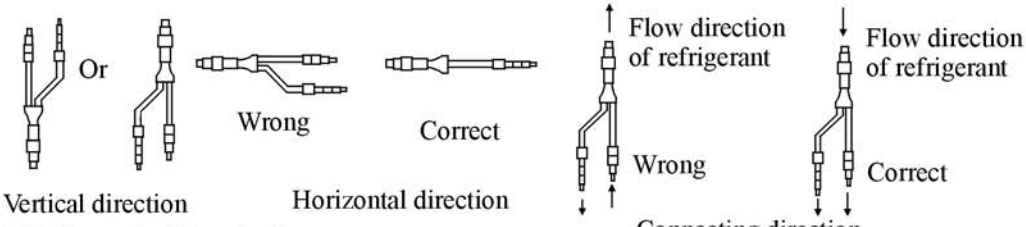


Diameter of pipe	Dimension A (mm)
Ø 6.35mm(1/4")	0.8~1.5
Ø 9.52mm(3/8")	
Ø 12.70mm(1/2")	2.2~2.6
Ø 15.88mm(3/4")	

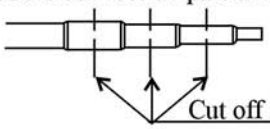
Cutting and flaring pipe
If using pipe cutter, the burs must be removed.
After inserting flaring machine, flare pipe nozzle to be bell-mouthed.
When using branch pipes, do installation work in the directions shown in the below figures.

Correct	Uncorrect				
	Slant	Break	Crack	Partial	Too outside

- When using branch pipe, please install it as shown in the following Fig.

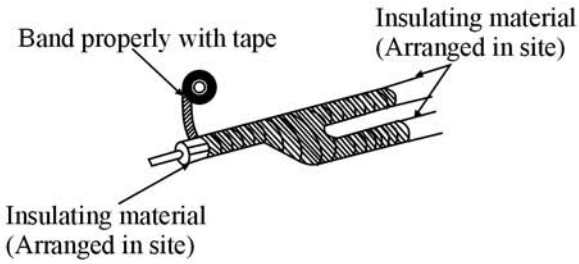


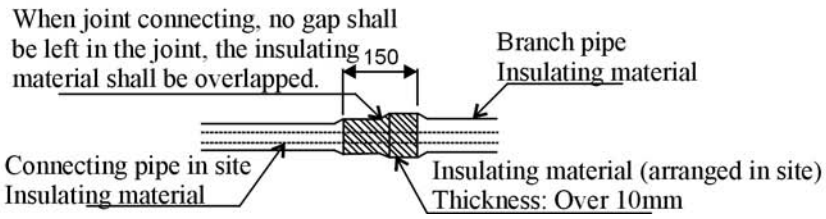
- Cutting part of branch pipe
Cut the connection part off centrally, and remove the burs.



For the cutting of branch pipes, it is necessary to use micro-cutter.

Heating insulation of pipes
Insulation of branch pipe part;after connection the attached heat insulation materials of the branch pipe with the site pipes, bind them properly.





(4) Pipe connection of the outdoor unit

Referring to the installation diagram in page 4, connect the indoor unit, outdoor unit, branch pipe and electronic expansion valve together by using the pipe connection method and welding method.

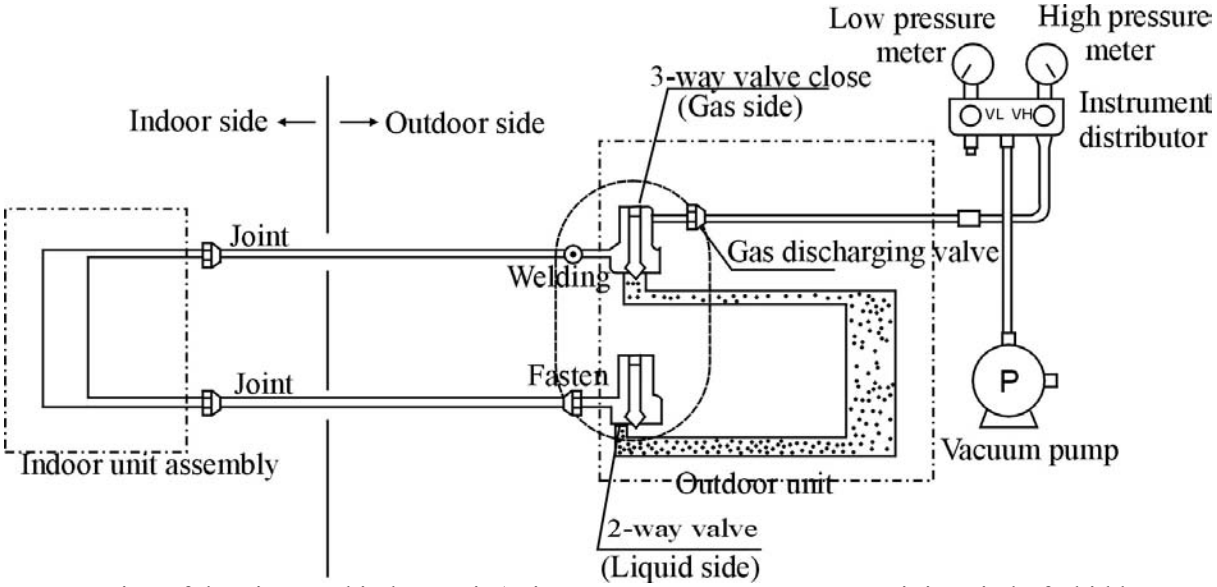
(5) Test of airtight quality

After connection of the refrigerant pipes, carry out airtight quality test. In this test,

8.9 Test of leakage after wiring work is finished

After connection of the refrigerant pipes, carry out leakage test. In this test, pressurize to the pipes as shown in the below figure by using nitrogen tank.
Close the valves of the gas side and liquid side totally.
The nitrogen may enter the cycle system of the outdoor unit, so that, before pressurizing, the valve rods must be fastened. (Both the gas side and liquid side).
For each of the refrigerant system, pressurize from the discharge valve of gas side in procedure.
When doing leakage test, it is absolutely forbidden to use oxygen, flammable gas and poisonous gas. The indoor unit expansion valve must be open.

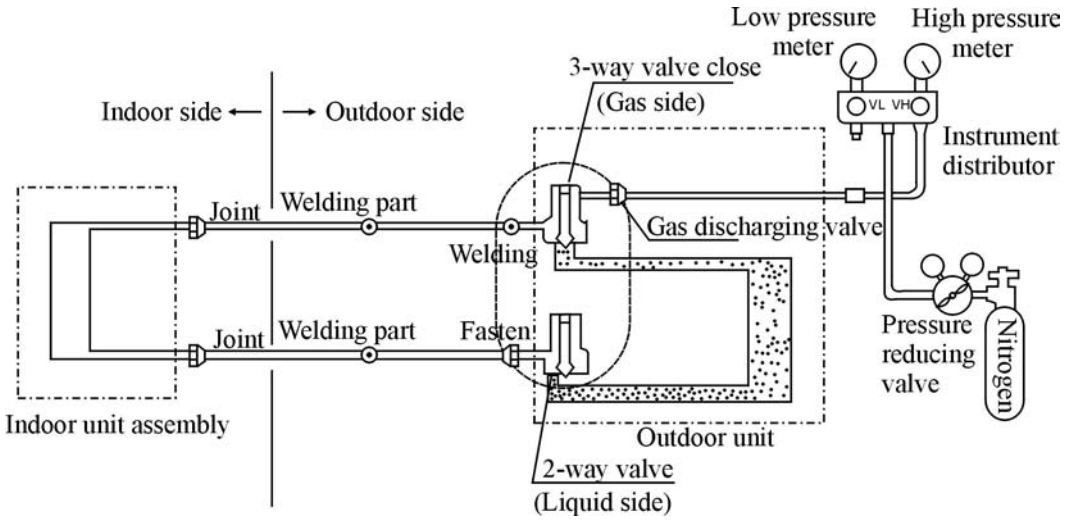
After wiring work and setting the address, switch on the indoor units and after 25-30s put down the power,then charge the nitrogen gas.



5 vacuuming of the pipes and indoor unit (using vacuum pump to vacuums, it is strictly forbidden to use refrigerant purging)

a. Choose of vacuum pump: it shall choose those that can reach a good vacuity (over 200Pa)and have a large air discharge amount (over 40L/min).

b. After finishing the airtight quality test and the nitrogen discharging , connect the instrumental diverter to the 3-way discharge valve, then connect the vacuum pump according to the below figure.



c. Vacuumize 2~3 hours according to the length of the pipe. When vacuuming, confirm the gas side and liquid side of the 2-way valve and 3-way valve shall be in full close state.

d. When it is not lower than 200Pa after 2 hours or more vacuuming, vacuums for another 1 hour. If after more than 3 hours vacuuming it is still not lower than 200Pa, the leak part shall be found.

e. When it is lower than 200Pa after more than 2 hours vacuuming, close both the valve VL and VH of the diverter, then close the vacuum pump. Place it there to observe if the vacuity changes. If it changes, it indicates leakage exists, so the leak part shall be found.

f. After finishing the above vacuuming work, replace the vacuum pump with refrigerant tank and turn to the refrigerant charging procedure.

8.10 Charging of refrigerant

1. Calculation of additional charging amount of refrigerant

After finishing vacuuming work, replace the vacuum pump with refrigerant tank and turn to the refrigerant additional charging procedure.

Calculation of additional charging amount of refrigerant

Before the air conditioner leaving factory, the refrigerant-charging amount does not include the refrigerant in the site pipe part. Calculate the refrigerant amount for the site pipe first, then do the additional refrigerant charging work.

Refrigerant charging amount when air conditioner leaves factoryR22: 2x1.6Kg; R407C:2x2.0Kg.

Calculation method:

According to the liquid pipe dimension of site pipe and actual length to calculate the additional refrigerant-charging amount.

Calculation formula:

Site refrigerant charging amount=Length of liquid pipe x additional refrigerant charging amount/m

For example: additional charging amount

R (kg) = (L1x0.030kg/m)+(L2x0.065kg/m)

L1: Total length of liquid pipe diameter 6.35mm;

L2: Total length of liquid pipe diameter 9.52mm.

2. Charging of refrigerant

Close all valves of outdoor unit, and charge refrigerant from air discharge valve of gas side.

When can not charge the specified amount, firstly, open all the valves, both liquid side and gas side, of outdoor unit, then switch the valve of gas side to close state a little. Under this condition, do cooling operation and charge refrigerant from the discharge valve of gas side. At this time, adjust the valve of the refrigerant tank to make the refrigerant in Gas State when it is absorbed by system.

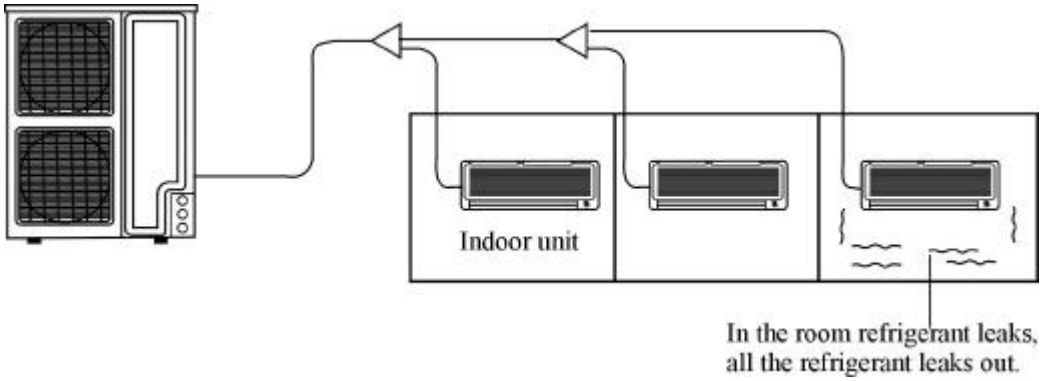
When refrigerant leakage making refrigerant lack in system occurs, the intrinsic refrigerant of the system shall be recovered and recharge it according to specified amount.

3. Opening of the refrigerant pipe

Open all the valves of outdoor unit

8.11 Refrigerant

MRV central air conditioner uses refrigerant "R22". This refrigerant itself is innocuous, non-combustible safety refrigerant. But then, when arranging the air conditioner equipment, it is necessary to take some steps to take precautions against in case of the indoors refrigerant leakage. Such as, the room size shall be taken into account to avoid making the concentration of the refrigerant not exceed the concentration limit and other relevant steps. The concentration limit is the concentration that is not harmful to human body and can take emergency steps to treat the concentration of Freon.
Concentration limit of R22: 0.3kg/m3



1. Sequence of refrigerant concentration affirmance

Calculate the refrigerant concentration according to the following sequence.
(1) Calculate the total refrigerant-charging amount of each of the refrigerating system (kg).

- Refrigerant charging amount of outdoor system + Additional refrigerant charging amount = Total refrigerant charging amount of the refrigerating equipment (kg).
- Refrigerant charging amount of outdoor system: Refrigerant charging amount when air conditioner leaves factory.
- Additional refrigerant charging amount: Additional refrigerant charging amount according to the site pipe length and pipe diameter.

(2) Calculate the minimum size of the room suitable for the indoor unit assembly (m3).
(3) Calculate the concentration of refrigerant:
Total refrigerant charging amount of refrigerating equipment/the minimum room size suitable for indoor unit assembly (m3) ≤ Refrigerant concentration limit: 0.3kg/ m3

2. Countermeasure when exceeding the concentration limit

(1) Set an effective opening for ventilation and fresh air.

- Cut an intake respectively on the upper and lower part of the door which areas are equivalent to 0.15% grounding area, or cut an intake in other part of the room.

(2) Reduce the total refrigerant charging amount of the refrigerating equipment

- Shorten the refrigerant pipe length. Reduce the installation place distance between the outdoor unit and the indoor unit to shorten the refrigerant pipe length, so that reduce the total refrigerant charging amount of the refrigerating equipment.

(3) Establish ventilation and fresh air system

- Establish a mechanical equipment for fresh air to keep the refrigerant concentration below the concentration limit (normal ventilation)\
- When can not ventilate the normally, please set an alarm apparatus linked with the mechanical ventilation equipment.

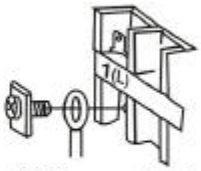
8.12 Electric wiring

Note:

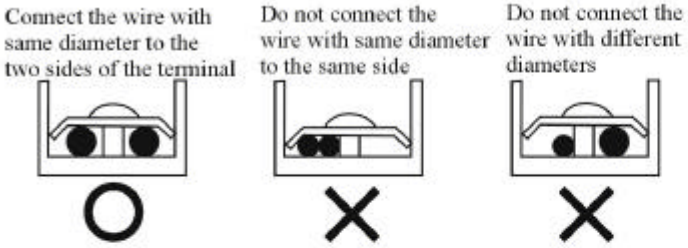
- The air conditioner must use special circuit (over 40A), and wiring by the qualified electrician according to the wiring rules specified in national standard.
- The grounding wire and the neutral wire shall be strictly separated. Connect the neutral wire with grounding wire is incorrect.
- The electric leakage breaker must be installed.
- All the electric wire must be copper wire. When wiring, there shall keep a proper distance between the power line and communication wire to avoid twist together. Otherwise, signal disturbance will occur, and the air conditioner can not operate normally.
- Power supply: 1PH, 220V~, 50Hz, the power supply connects from the outdoor side.
- The wiring method of power line is Y connection. If the power line is damaged, in order to avoid risk of electric shock, it must be replaced by the manufacturer or its repair center or other similar qualified person.
- Specification of wire and short circuit protector in site wiring:

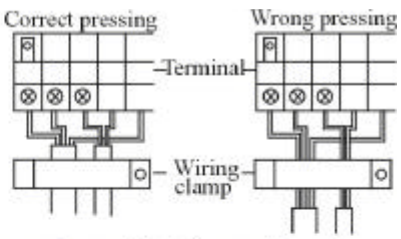
Type / Contents	Power line	Connection wire	Connection signal wire	Short circuit protector
Specification	YZW	YZW	YZW	----
Parameter	3 x 6mm2	3 x (1~1.25mm2)	2 x (0.75~1.25mm2)	40A

Note: The signal wire using shielded wire is recommended.

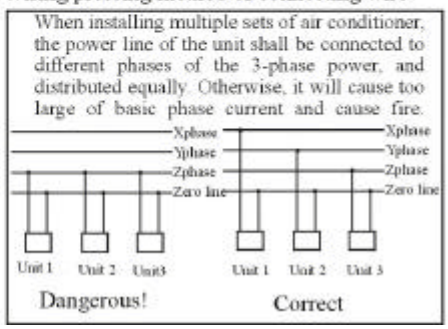


Wiring method of ring-type terminals





Wiring pressing method of connecting wire



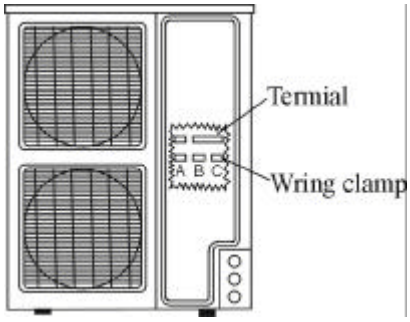
Wiring method

1. Wiring method of orbicular terminals
   For the connection wire with orbicular terminals, its wiring method is as shown in the right figure: remove the connecting screw, put the screw through the ring on the end of the wire, then connect to the terminal block and fasten screw.
2. Wiring method of straight terminals
   For the connection wire without orbicular terminals, its wiring method is: loosen the connection screw, and insert the end of the connection wire completely into the terminal block, then fasten the screw. Slightly pull the wire outwards to confirm it is firmly held.
3. Crimp connection method for wires without terminals

Crimp connection method for connection wire

After connection, the wire must be fastened by wire cover. The wire cover shall press on the protection coat of the connection wire, as shown in right top figure.

Note: When connecting the wiring, confirm the terminal number of indoor and outdoor units carefully. The terminals with same number and color connect with a same wire. Incorrect wiring will damage the controller of air conditioner or the unit can not operate.



Wiring method of outdoor unit:

- Power line (connects from outdoor unit)
  Remove the repair board of the outdoor unit and loosen the wire cover A, then put the live wire, neutral wire and grounding wire through the wire cover A, and connect them to terminal block correspondingly. After connection, fasten wire cover A to its previous state.
- Power line and communication wire of indoor unit
  Loosen wire cover B and C, put the power line and communication wire connected with A, B system indoor unit through the wire cover B and C, and connect them to terminal block correspondingly. After connection, fasten wire cover B and C to its previous state.
  Note: Power line, connection wire and communication wire are provided by consumers themselves.

Wiring method of indoor unit

- Power line and communication wire of indoor unit
  Loosen wire cover and connect the power line and communication wire of indoor unit to the terminal correspondingly.
- Drive wire of electronic expansion valve
  Air-connect the drive wire of electronic expansion valve with the down-lead from the control base board of indoor unit.
  After the above connection, fasten the wire cover to its previous state.

Wiring method of electronic expansion drive

Open the box cover of the drive and put the drive wire of electronic expansion valve through the rubber ring, then correspondingly connect the connection wire with the terminal of control base board of the drive. Use nut to connect the grounding wire on the drive box and use wire clamp to fasten the wire. Put on the cover, the wiring connection is finished.

Note:

When connecting power line to power supply terminal, please pay attention to the following items:

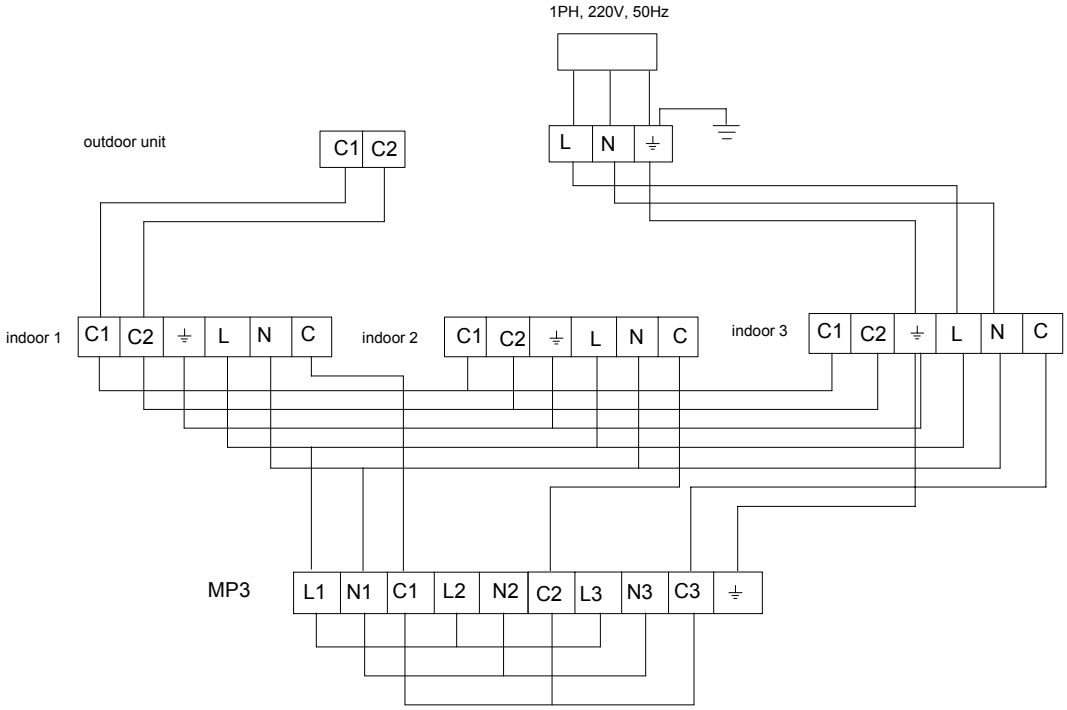
1. Do not connect the power line with different dimensions to the same connection wire end. Improper contact will cause heat generation.

2. Do not connect the power line with different dimensions to the same grounding wire end. Improper contact will affect protection.
3. Keep a proper distance between the communication wire and the power line. Otherwise, abnormal communication will occur because of disturbance.
4. Do not connect the power line to the connecting end of communication wire. Incorrect connection will cause damage of connected unit.
5. The communication wire must be shielding wire.

Wiring example diagram:

Indoor unit: AE*3

Outdoor unit: AU48-

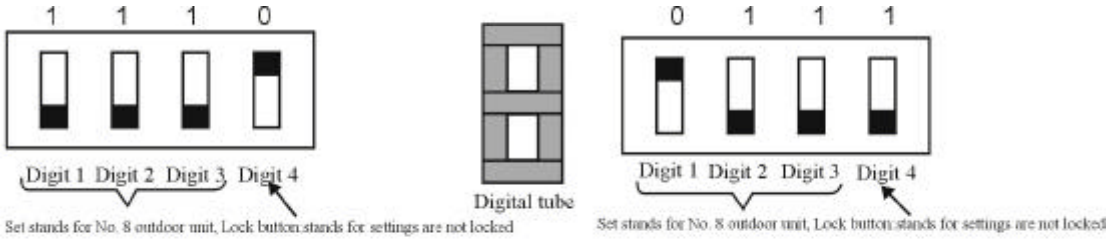


8.13 Unit address number setting

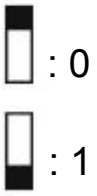
In order to centrally control MRV air conditioner system, it needs to make unit number setting to indoor units and outdoor unit (control address).

a. Table of relation between dialing switch and outdoor unit number

Digit 1	Digit 2	Digit 3	Unit number stood for
0	0	0	1



Bit 123	Preelected number	Confirmed number after electrified
000	1	1
001	2	2
010	3	3
011	4	4
100	5	5
101	6	6
110	7	7
111	8	8

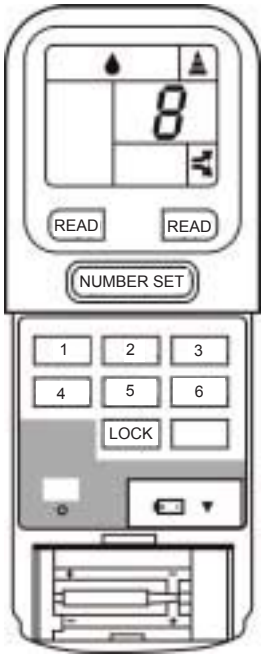


b. Setting of indoor unit number

After installation or after adding new indoor units, when electrifying for the first time, it is necessary to set unit number to the indoor units (note: the cabinet type indoor unit has been set to be No. 3 unit, it is unnecessary to reset unit number to it. At the same time, it is forbidden to set other units as No. 3 unit). Before electrifying, the lock button of the dialing switch shall be at locked state. After electrifying:

- When indoor unit number is not set, the power light, operation light and timer light will flash together waiting for receiving unit number.
- When indoor unit switches from one system to another system, because of the conflict between the existed control address and the address auto set by outdoor unit to indoor unit, the phenomenon of power light, operation light and timer light flashing together will appear.
- When using special remote controller to do unit number setting, it shall be done at a place 1m away from the infrared receiver window. The specific setting method as follows: press the number button according to the unit number to be set, then press set button to send signal.
- When indoor unit receives the signals from the special remote controller, the buzzer will give a "Pi" sound, the flash of power light, operation light and timer light will stop together, it indicates the indoor unit has received the signal. The set unit number can be confirmed by using the "checking" function of special remote controller. The power light of indoor unit will flash the set unit number (for example: the set unit number is 5, after pressing "checking" button, the power light will flash 5 times).

- After setting all the indoor units number, push the lock button of the outdoor dialing switch to locked position, unit number setting is unallowed. At this time, when indoor unit receives signals from special remote controller, it will give “Pi, Pi” sound twice to indicate refusing to change unit number.
- If finding the repeated set unit number in unit number setting, the buzzer will send “Pi, Pi” sound twice to refuse to set.
- When setting unit number, in order to avoid setting the same number to many indoor units, there shall be a 10 seconds interval among each setting. So that, when repeated unit number appears, the indoor unit will automatically find out.
- When setting unit number, please set the unit number in sequence and record carefully to avoid repeated unit number setting.
- The special remote controller is shown below



Note: Press button 6 and at the same time in 2 seconds press button 1, then loosen them simultaneously. The LCD will display “7”, which stands for selecting unit 7. And then press button “set”, you can set unit 7.
Using the same method, press button 6 plus button 2, you can set unit 8.

8.14 Checks after the installation

After installation, please fill in the following form for easy daily maintenance:

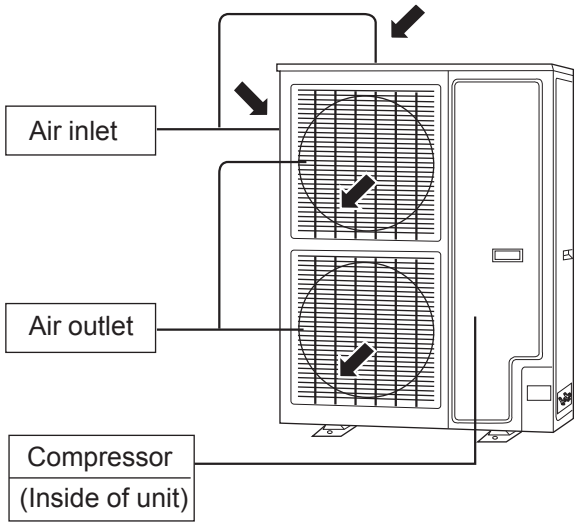
No.	Model of indoor unit	Factory No. of unit	Site setting No.	System belonged (A/B)
1				
2				
3				
4				
5				
6				

Check for installation and test run

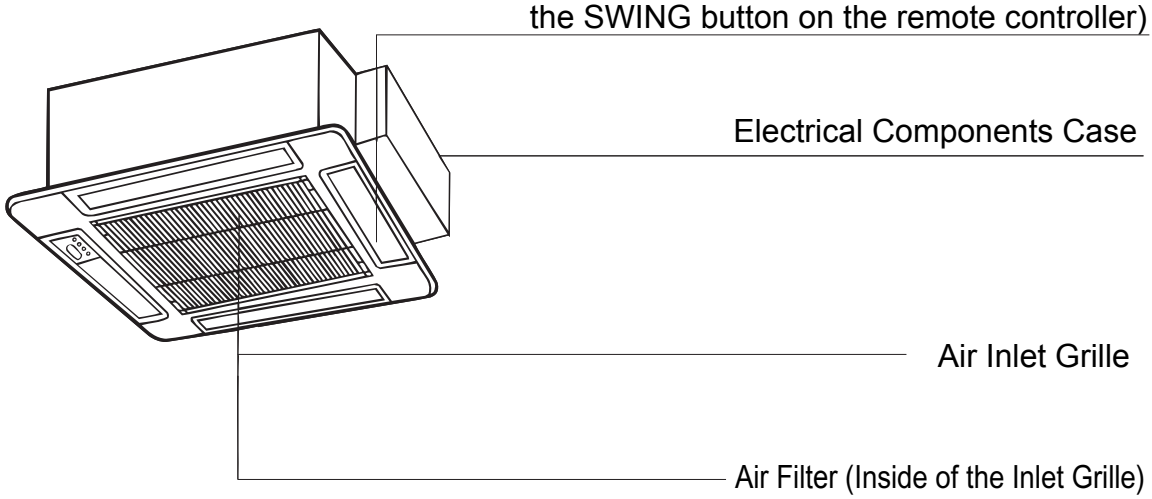
- Please operate the air conditioner according to the operation manual.
- Check items for test run, put mark √ in □
- Gas leakage from pipe connection ?
  Heat insulation treatment of pipe connection?
- Is the connection wiring of indoor and outdoor unit firmly inserted into the terminal block?
- Is the connection wiring of indoor and outdoor firmly fixed?
- Is drainage securely arranged?
- Is the ground wire securely and firmly connected?
- Is power supply voltage abided by electric code?
- Is there any noise?
- Does cooling perform normally?
- Does room temperature regulator operate normally?

6 PARTS AND FUNCTIONS

Outdoor unit

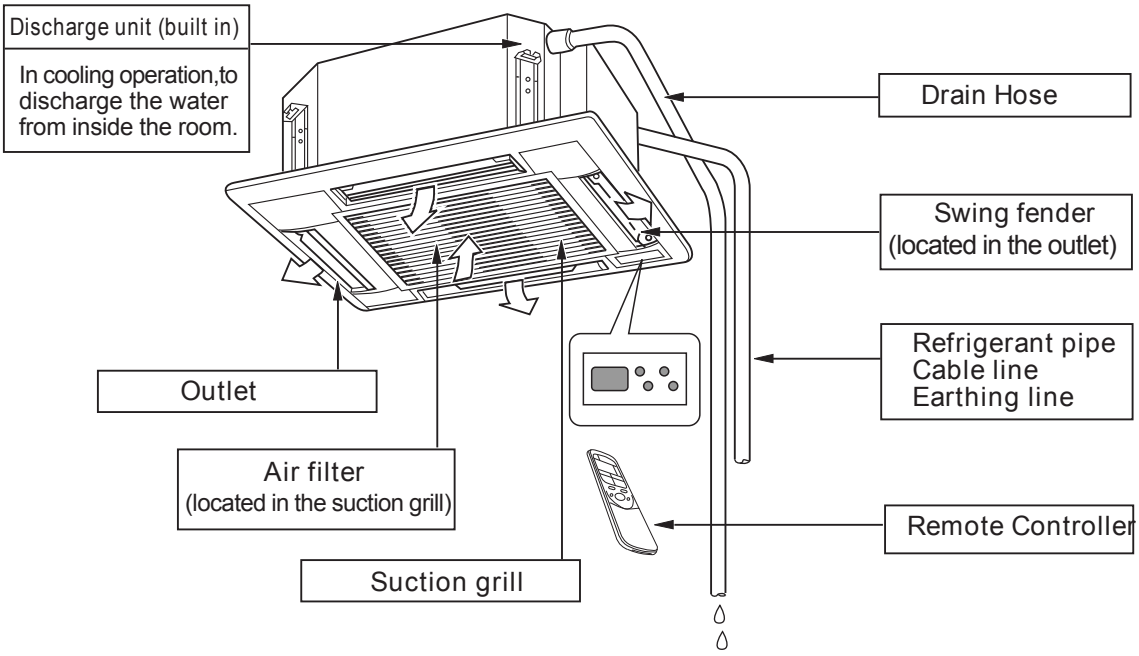


Cassette type Indoor unit

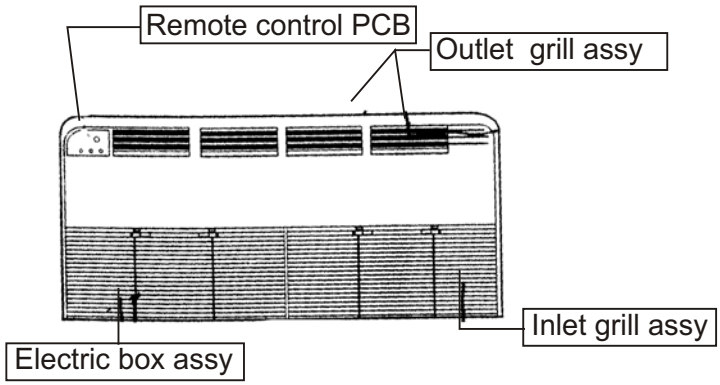


6.Parts and functions

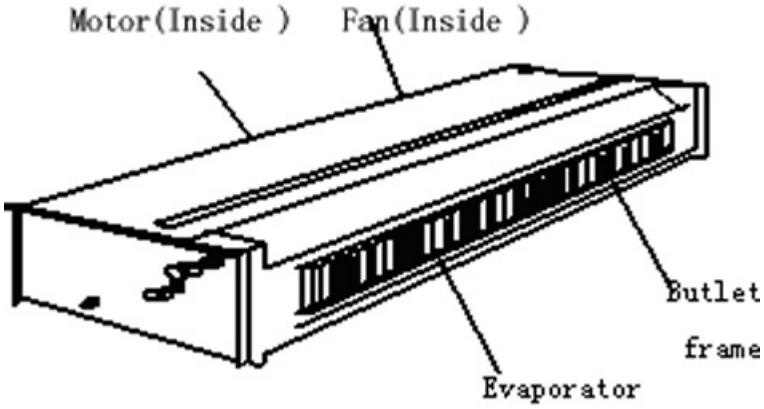
Cassette type Indoor unit :



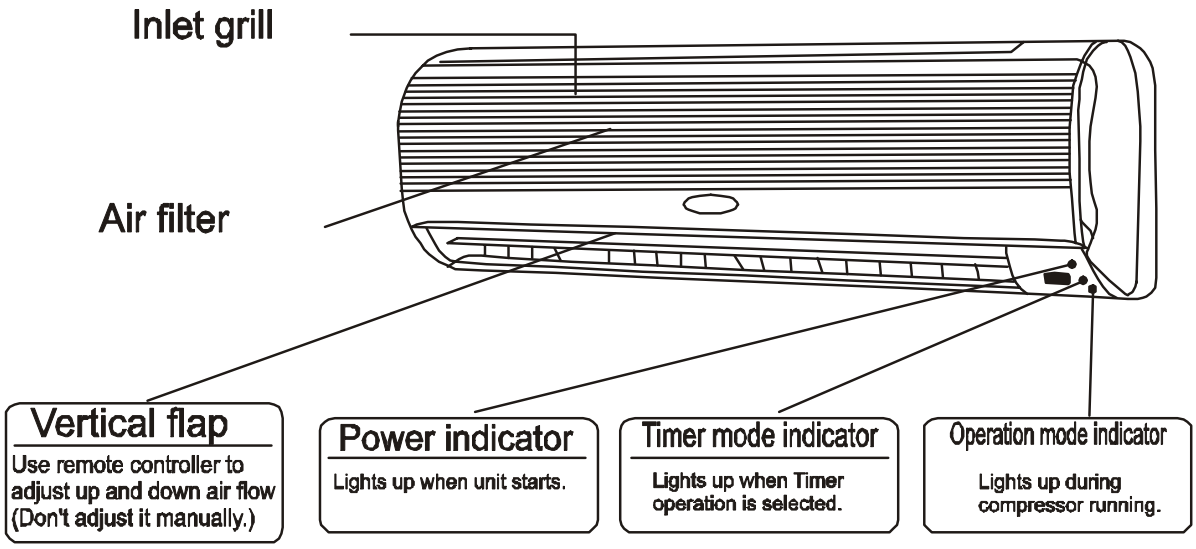
Convertible type Indoor unit :



Celing concealed type indoor unit



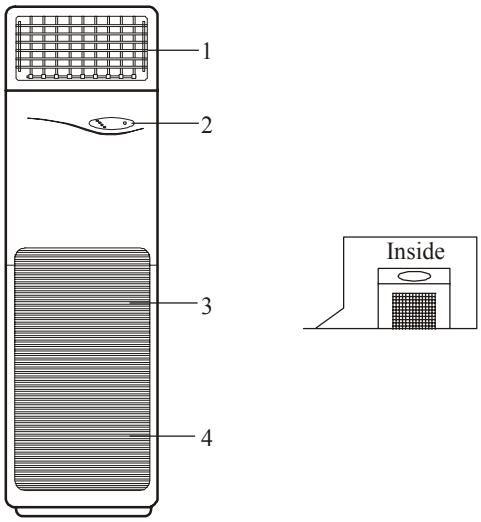
Wall mounted type



Indoor Unit

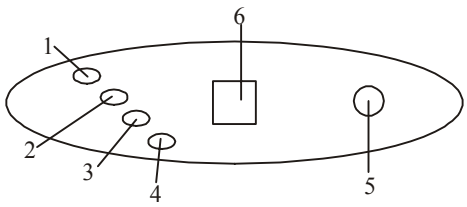
AP182FAAHA

1. Outlet
2. Operation Board
3. Inlet
4. Inside
5. Dust Filter



Operation Board

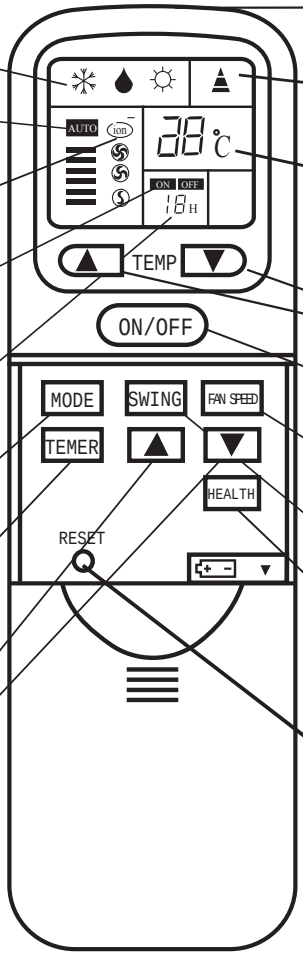
1. Health
2. Power
3. Time set
4. Running
5. On/off button
   Press this button to start the air conditioner for emergency operation.
6. Remote Signal Receiver



7 REMOTE CONTROLLER FUNCTIONS

7.1 Controllers

7.1.1 Wireless remote controller



Mode
Operation option display

Airflow volume
Airflow volume display
Speed is automatically adjusted by the air conditioner according to room and set temperatures.

Ion emission
Ion performance display

Timing mode
Timing mode display
Normal
Timer Off
Timer On

Timing period
Display of the time set for timer on or off.

Mode option
For cooling, dehumidifying or heating

Timer
For timing mode option

Time setting
Increase and decrease

Signal Transmitter
Sending signals to the indoor unit receiver

Signal icon
Flashing while the signal is sent

Temperature
Display of set temperature value

Temperature setting
For desired room temperature

On/Off
Turning the appliance on or off

Airflow volume
For desired airflow speed

Airflow direction
For airflow direction adjustment

Ion emission
For ion emission setting

Reset
Press with a pointed article to reset value if abnormal operation occurs.

Cautions:

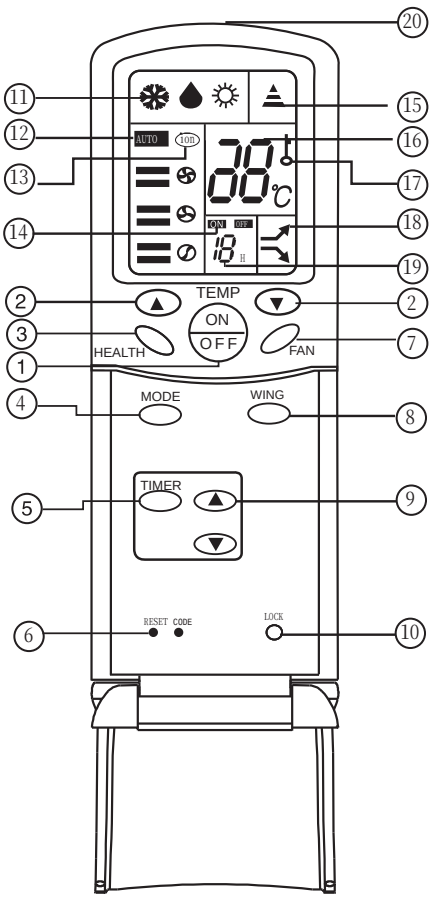
1.Default mode of the air conditioner will resume if the battery in the remote controller is replaced:
Mode: Cooling; Temperature: 26° C;
Timing: Normal; Airflow speed: Auto

7.1.3 Remote controller (new type)

***

Remote controller

Buttons and display of the remote controller



1.POWER ON/OFF
used for unit start and stop

2.TEMPERATURE
used to select your desired temp.

3.HEALTH
used to control the function of oxygen-making and ion-adding (when oxygen device and ion-generator are both acquirable*health button can control them, whether oxygen device is acquirable lies on the function of its outdoor.)

4.MODE
used to select cooling
d
ehumidity heating

5.TIMER
used to select:TIMER ON,TIMER OFF

6.RESET
press it with a needle to normal condition

7.FAN
used to select your desired fan speed

8.SWING
used to set fan direction

9.SET TIMER

10.LOCK
press it to lock buttons and press again to cancel lock

11.DISPLAY MODE
display the selected mode

12.DISPLAY FAN SPEED
used to display difference between indoor temp,and enacted temp.

13.HEALTH DISPLAY
used to show health state

14.TIMER DISPLAY
display the timer state:
"normal":no timer
"off":set time to shut off
"on":set time to start

15.SIGNAL
it flashes when you emit sign to indoor unit

16.TEMP. DISPLAY
display the temp. enacted.

17.LOCK DISPLAY
show that buttons have been locked

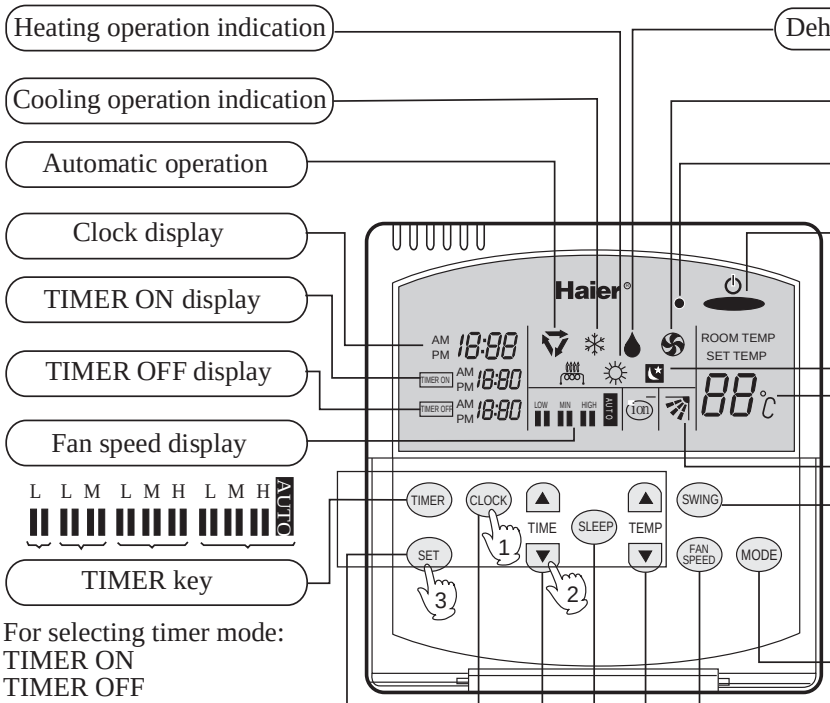
18.MIGHT/QUIET DISPLAY

19.TIME DISPLAY
display the time of "TIMER ON" and "TIMER OFF"

20.EMITTING PART
used to emit the sign to indoor receiver

NOTE: After replacing the batteries,press the "ON/OFF",remote controller will display as follows:
MODE:cooling, TEMP.:26
TIMER:normal,FAN:auto

7.1.3 Wired remote controller (old type)



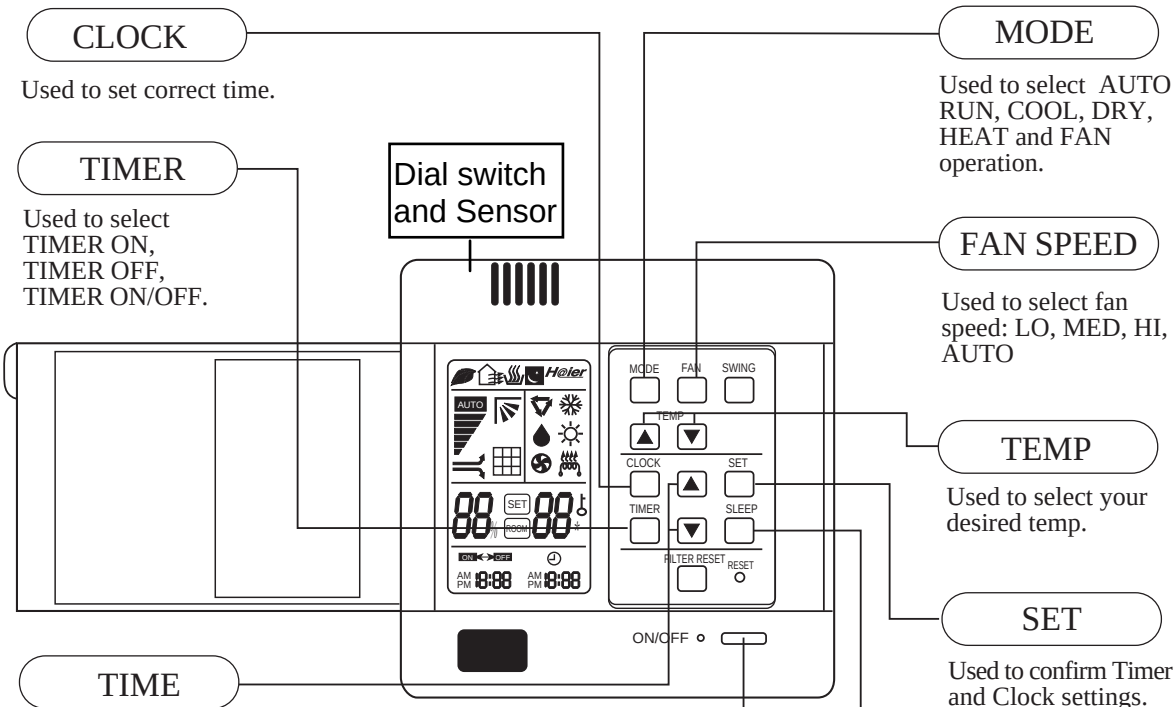
Note: This model of air conditioner doesnt provide the air sending direction adjustment function and thus the "LOU" key is disengaged while the automatic air direction indication may be displayed.
This remote controller hasn't electric-aided heating indication as well as anion generation function and indication.

Clock Set

When unit is started for the first time, clock should be adjusted as follows:

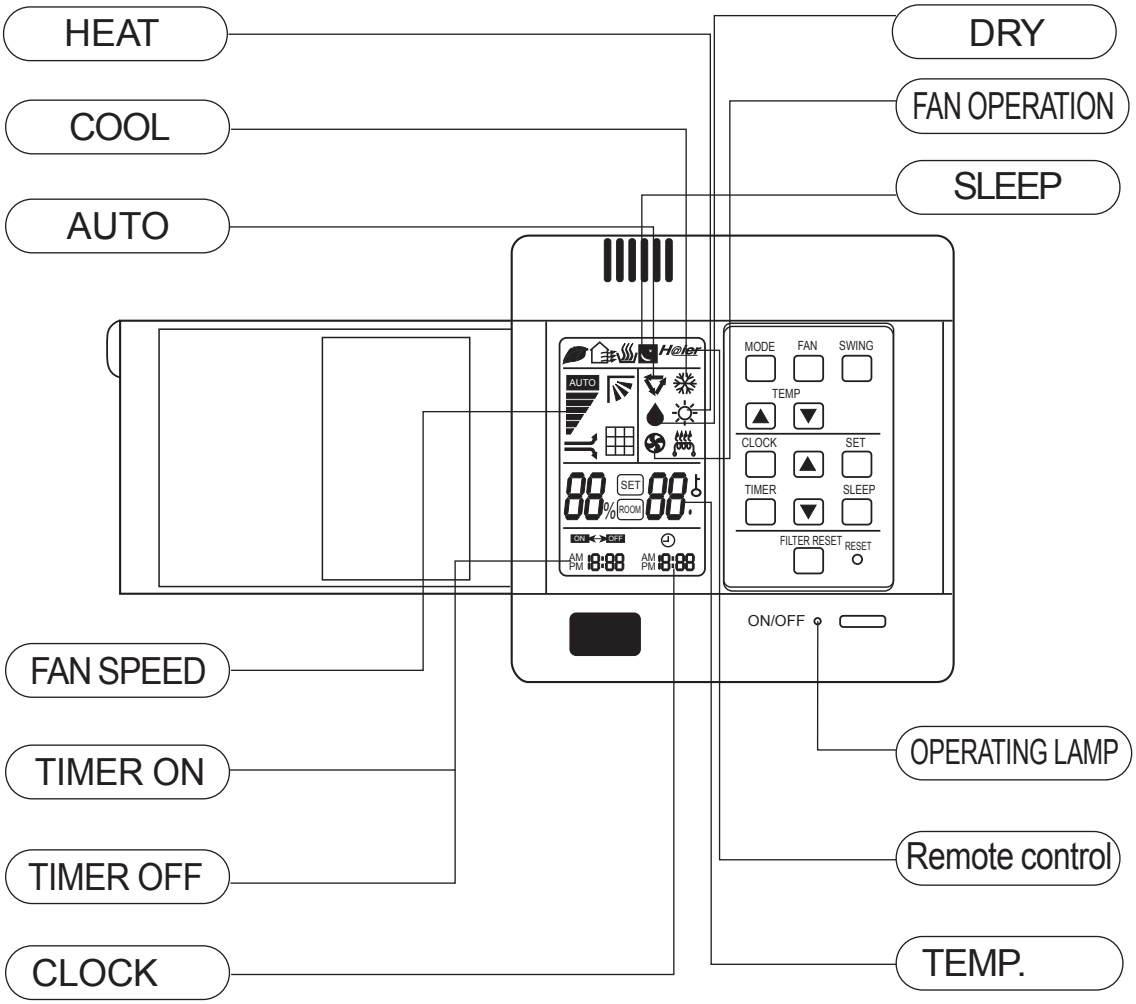
1. Press "CLOCK" key, "AM" or "PM" flashes at the clock display area.
2. Press the HOUR "▲"or "▼" key to set correct time. Each press will increase or decrease the time by 1 min. If the key is kept depressed, time will change quickly.
3. After time setting is confirmed, press "SET" key, "AM" or "PM" stop flashing, while clock starts working.

7.1.4 Wired remote controller (new type)



Note:

The above information is the explanation of the displayed information therefore varies with those displayed in actual operation.



Clock set

When unit is started for the first time, clock should be adjusted as follows:

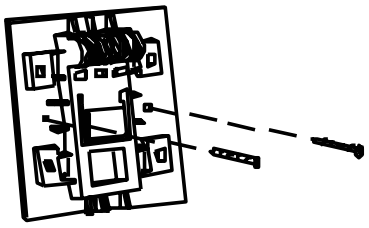
- Press CLOCK button, "AM"or "PM" flashes.
- Press ▲ or ▼ to set correct time. Each press will increase or decrease 1min. If the button is kept depressed, time will change quickly.
- After time setting is confirmed, press SET, "AM "and "PM" stop flashing, while clock starts working.

Installation of receive display

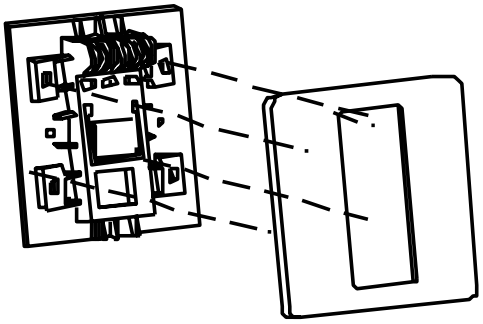
Because of the temperature sensitive device, do not install the receive display at straight sunlight place, either in front of air outlet grill, for it is effected greatly from cool air and heat air, the receive display is at least 20mm distance to the air outlet grill.

Since there is light sensitive device which receives wireless remote signal, so do not installed behind the window curtain or other obstacles, in order not to obstruct the signal.

Must fix the remote control wire far from strong electricity (such as the wiring of electric light, air conditioner, etc.) and weak electricity (such as the wiring of telephone, interphone, etc.).



A. Fix the receive display with screws on the selected place.



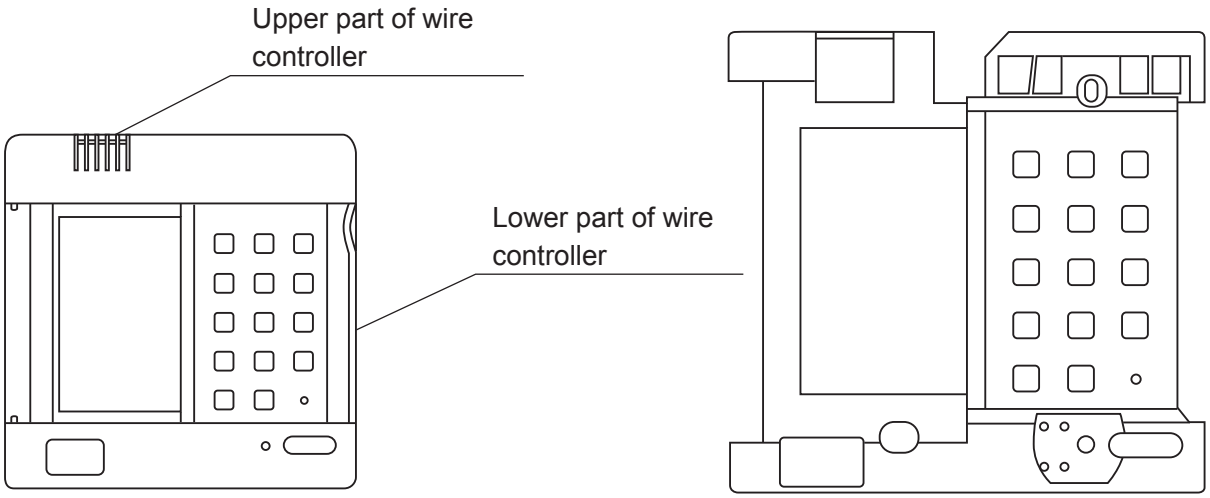
B. Place the panel onto the fixed frame, pay attention that the four claws must be placed into the corresponding four poles on the frame.

Installation of the wired remote controlller

a. Remove upper part of wire

Remove upper part of wire controller

PCB is mounted on lower part of wire controller, be careful not to damage



b. Install wire

(1) For exposed installation, use 2 wood screws(accessory).

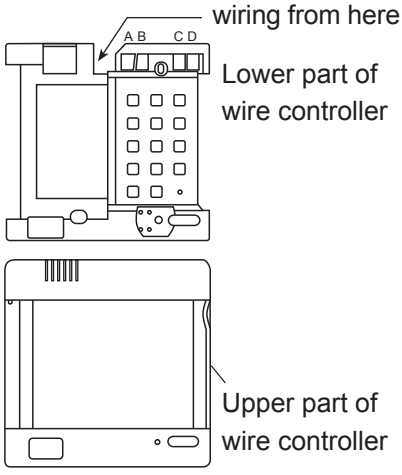
(2) For recessed installation, use 2 wood screws(accessory).

Note: Try as far as possible a flat surface for installation. Don't use excessive

c. Indoor unit wiring

Connect terminals (A,B,C,D) on lower part of wire controller to terminals (A, B,C,D) on PCB of indoor unit.

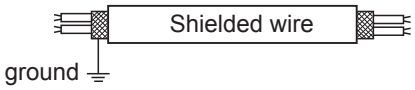
Hint:
When make wiring, please keepa distance between wires and power supply cord.



Wire size

Cord kind	Shield wire (4 core) (refer to Hint 3,4)
Size	0.33mm²

- Use shielede wires for telecommunication between wire controller and indoor unit; indoor unit and outdoor unit. Ground the shield on one side.
  Otherwise misoperation because of noise may occur.
- Signal wire is self-provided.



Hint: Tread surface of the terminal well so that shielding may not contact other part.

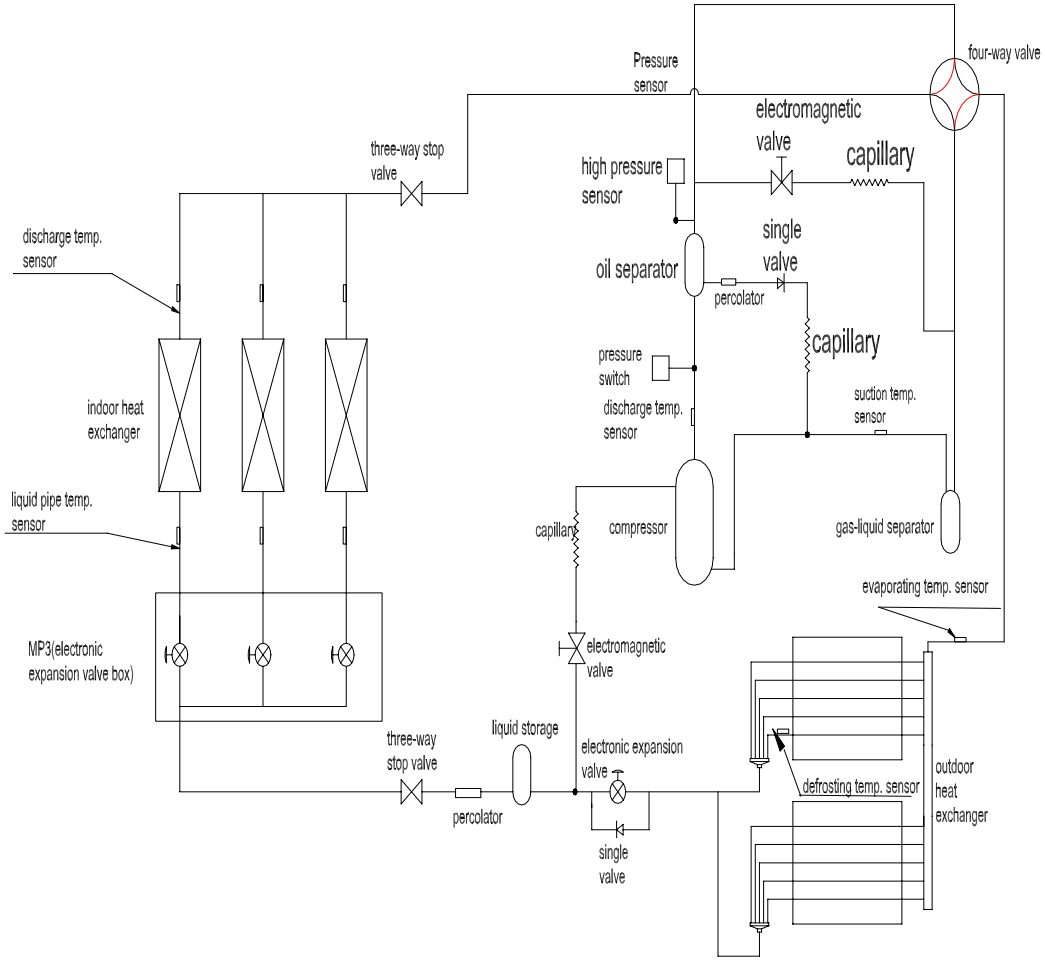
d. Replace the upper part of wire controller

Be careful not to press the wiring.

Hint: 1. Switch box and cord for wiring are not supplied.

2. Don't touch PCB with hand.

8. Refrigerant diagram



9 ELECTRICAL CONTROL FUNCTIONS

9.1 Function of special remote controller (Address setting)

1. Read function symbol
   Press "read" button , "1" flashes 1 time

2. Signal emitting symbol
   when "2" flashes ,it shows that remote controller is giving signal to indoor unit.

3. Indoor unit number
   press "8"button to select indoor unit number (1,2,3,4,5or6), then "3" flashes continuously ,press "7" to set indoor unit number

4. Button locked symbol
   When "9" is on the state of " ↗",press "10"button , "4" appears to show other buttons are locked .press "10"again to cancel

5 Code symbol
   press "9"button to select code type , When "5" is on the state of "↘" ,the emitting code to indoor unit is for product made in 1998.

6 Read button
   Press this button to give indoor unit signal , the power LED flashes to show indoor unit number.

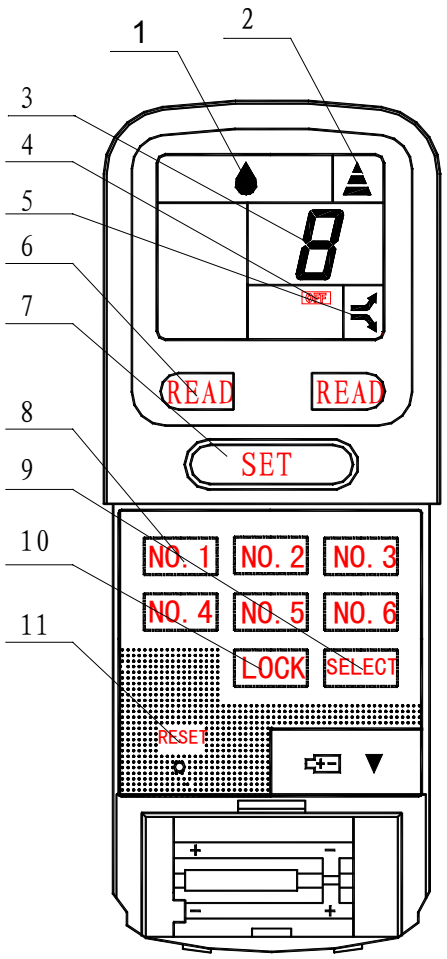
7 Indoor unit number setting button
   When "3" is continuously flashes ,Press this button and give signal to indoor unit to set the number selected.

8 Indoor unit number selection button
   use these 6 buttons to select indoor unit number to be set

9 Code selection button
   Use this button to select emitting code type
   Normally "5" is on the state of "↗".

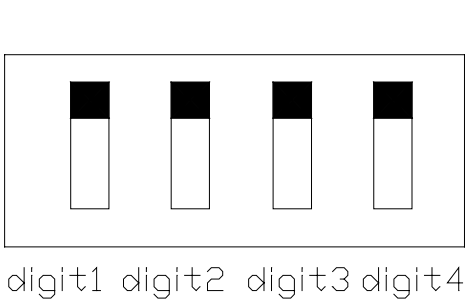
10 Lock button
   Press this button , "4"appears ,the other buttons will be locked

11 Reset Button
   When the remote controller is abnormal , press this button with pointed things to reset.

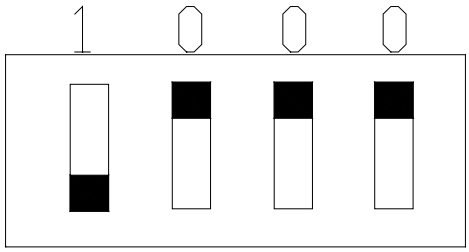


9.1.1 Number setting dialing switch using method(wired remoted control type)

The dialing switch is on indoor unit PCB. The indoor unit number setting method is as follows:



stand for NO.1 indoor unit

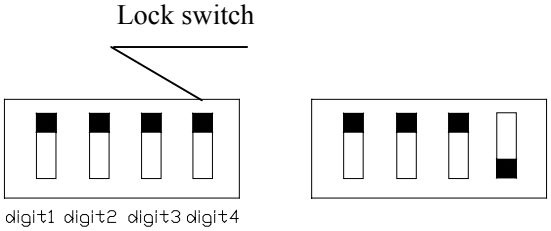


stand for NO.2 indoor unit

Digit 1	Digit 2	Digit 3	Digit 4	Unit number stand for
0	0	0	Not used	1
1	0	0	Not used	2
0	1	0	Not used	3
1	1	0	Not used	4
0	0	1	Not used	5
1	0	1	Not used	6

9.1.2 Indoor unit NO. lock switch (for model AU482FIAIA,AU48NFIAIA

We have " indoor unit NO. lock switch" on outdoor PCB to lock the indoor unit setting NO.

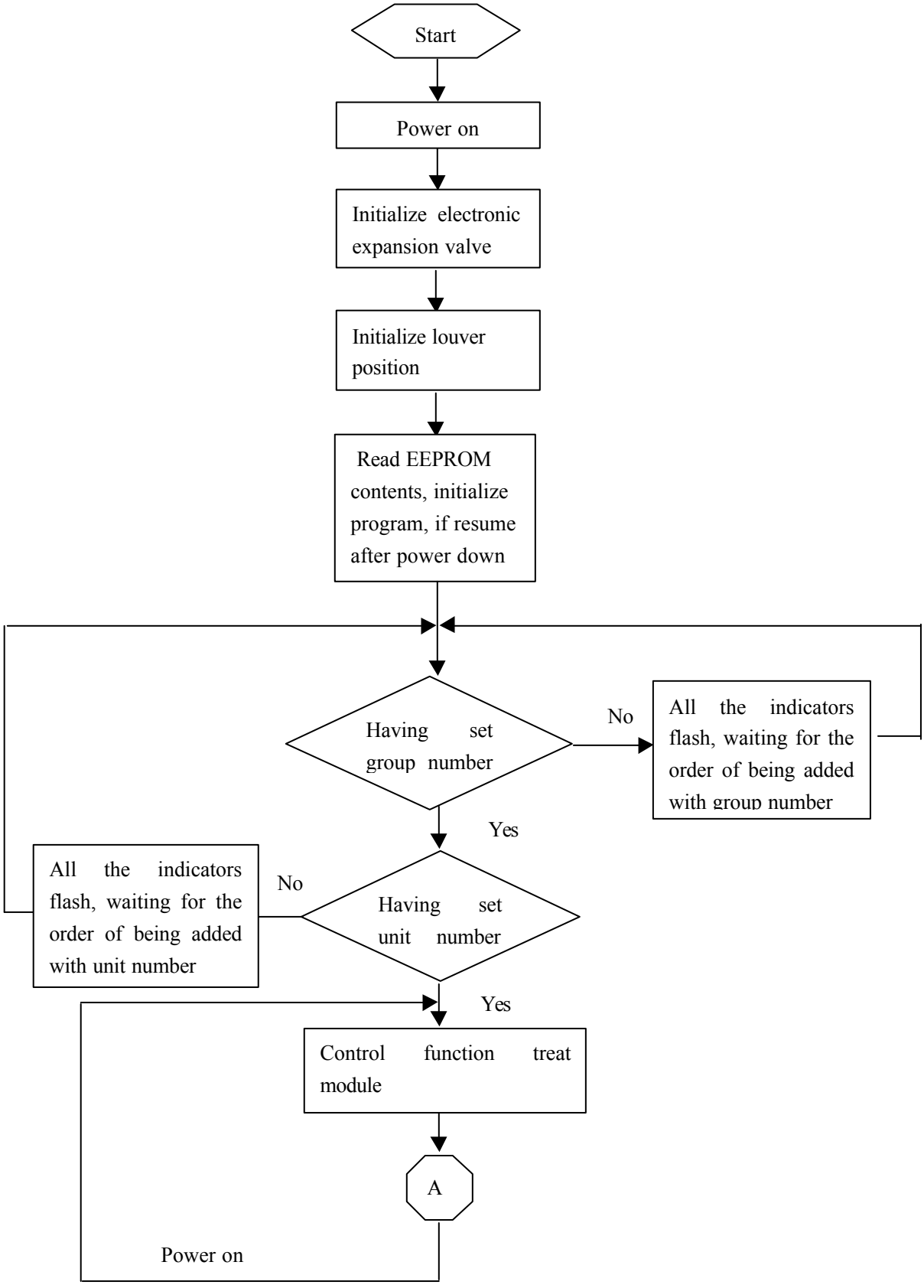


Unlock state lock state

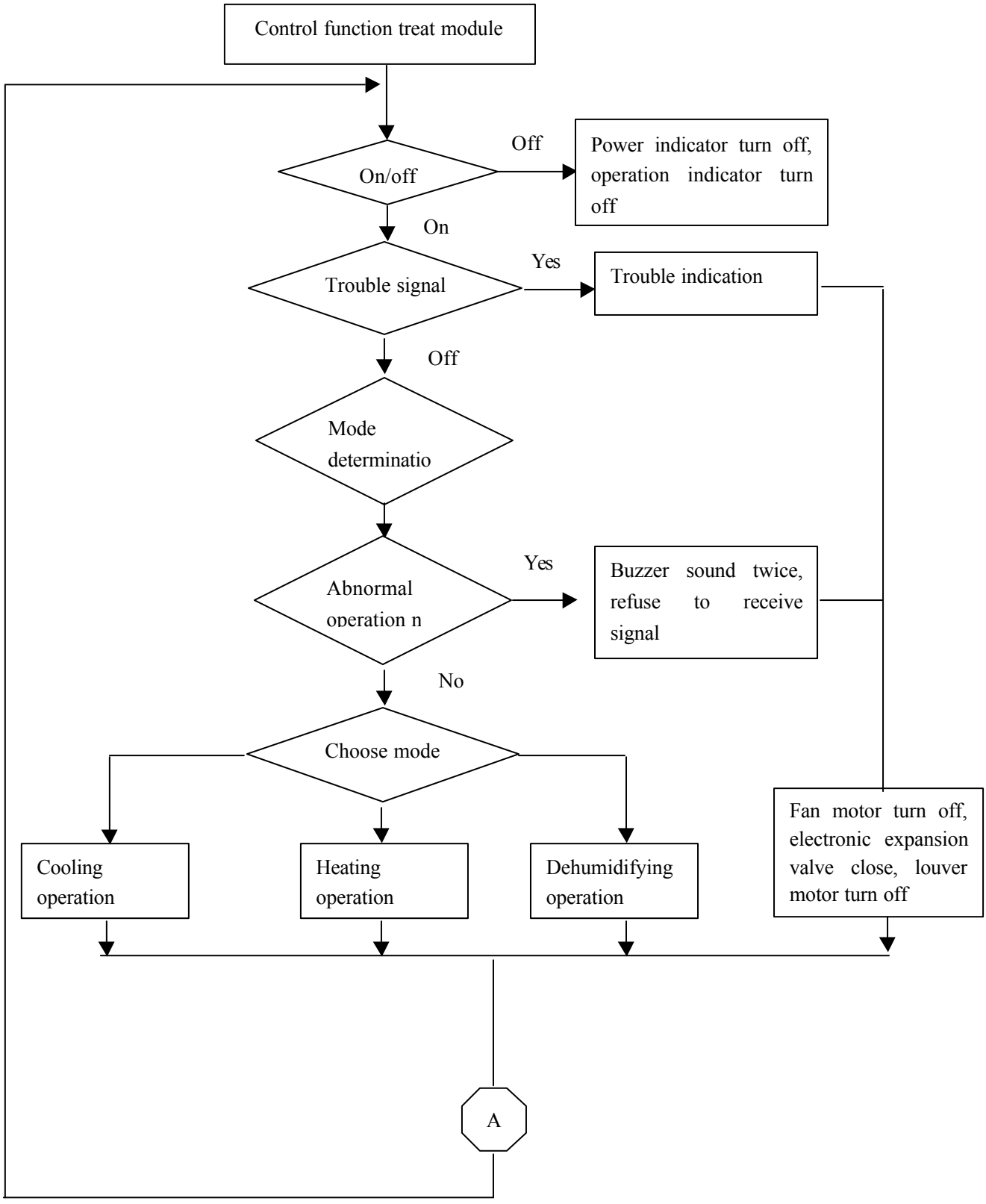
When the lock switch is at lock state, changing or setting indoor unit NO. is not allowed . When the lock switch is at unlock state, the outdoor unit will searching for the new added indoor unit. If the lock switch is always at unlock state, the outdoor unit will work normally and just have a longer communication time with the indoor unit. When you want to change the indoor unit NO. setting or you are installing the unit ,you must set the lock switch at unlock state .

9.2 Flow Chart for Operation

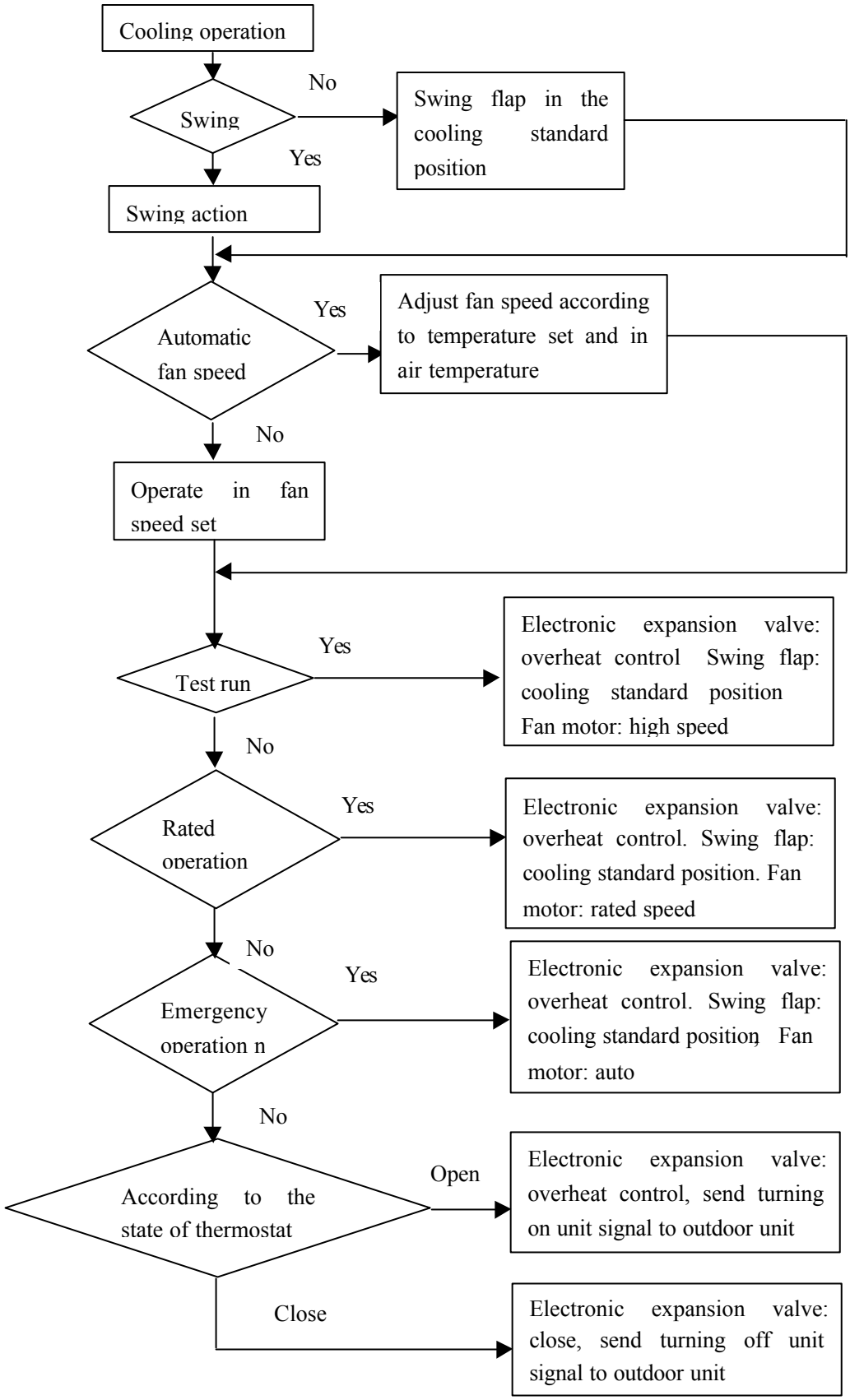
(1) Unit number setting



(2) Turn on/off unit



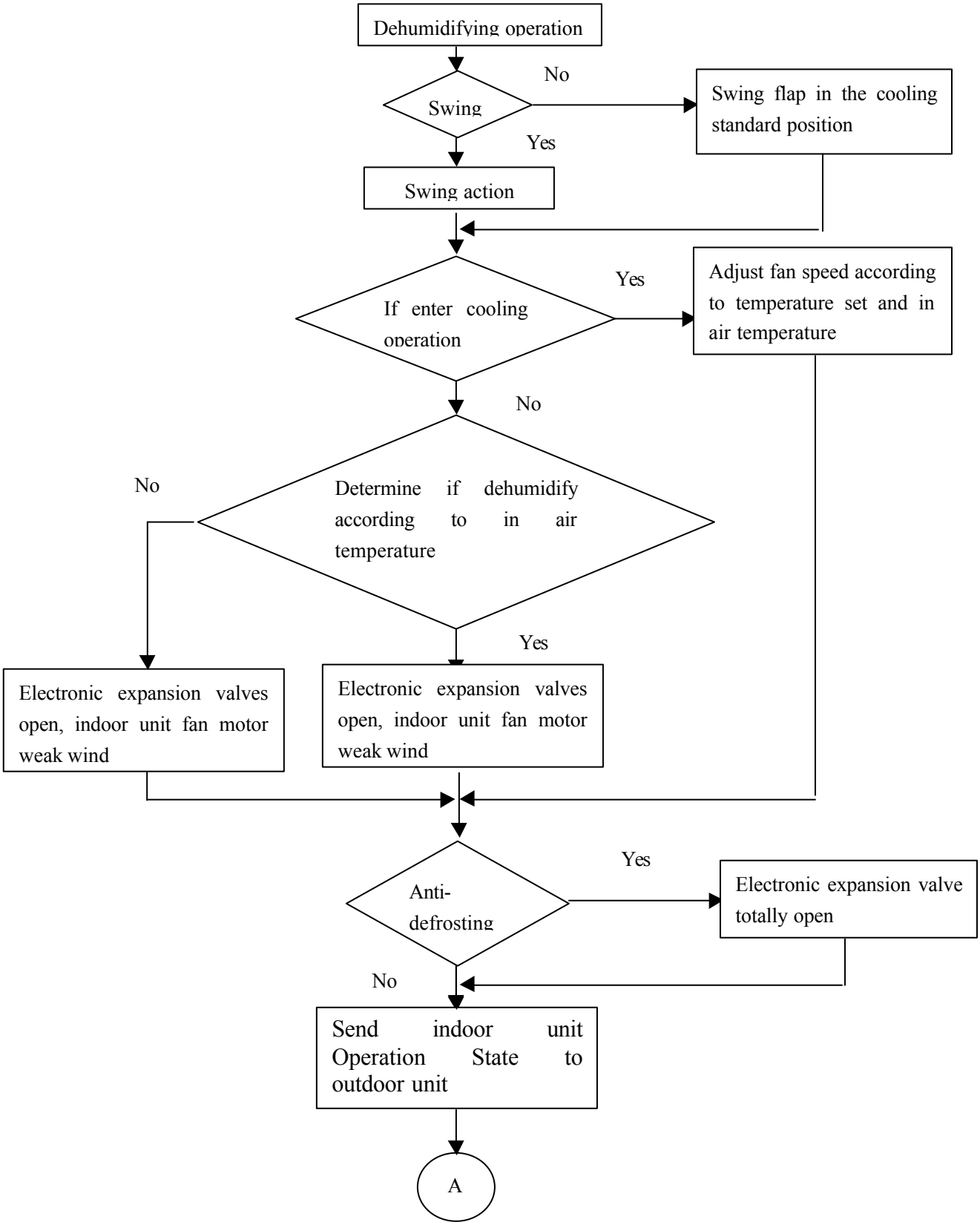
(3) Cooling operation



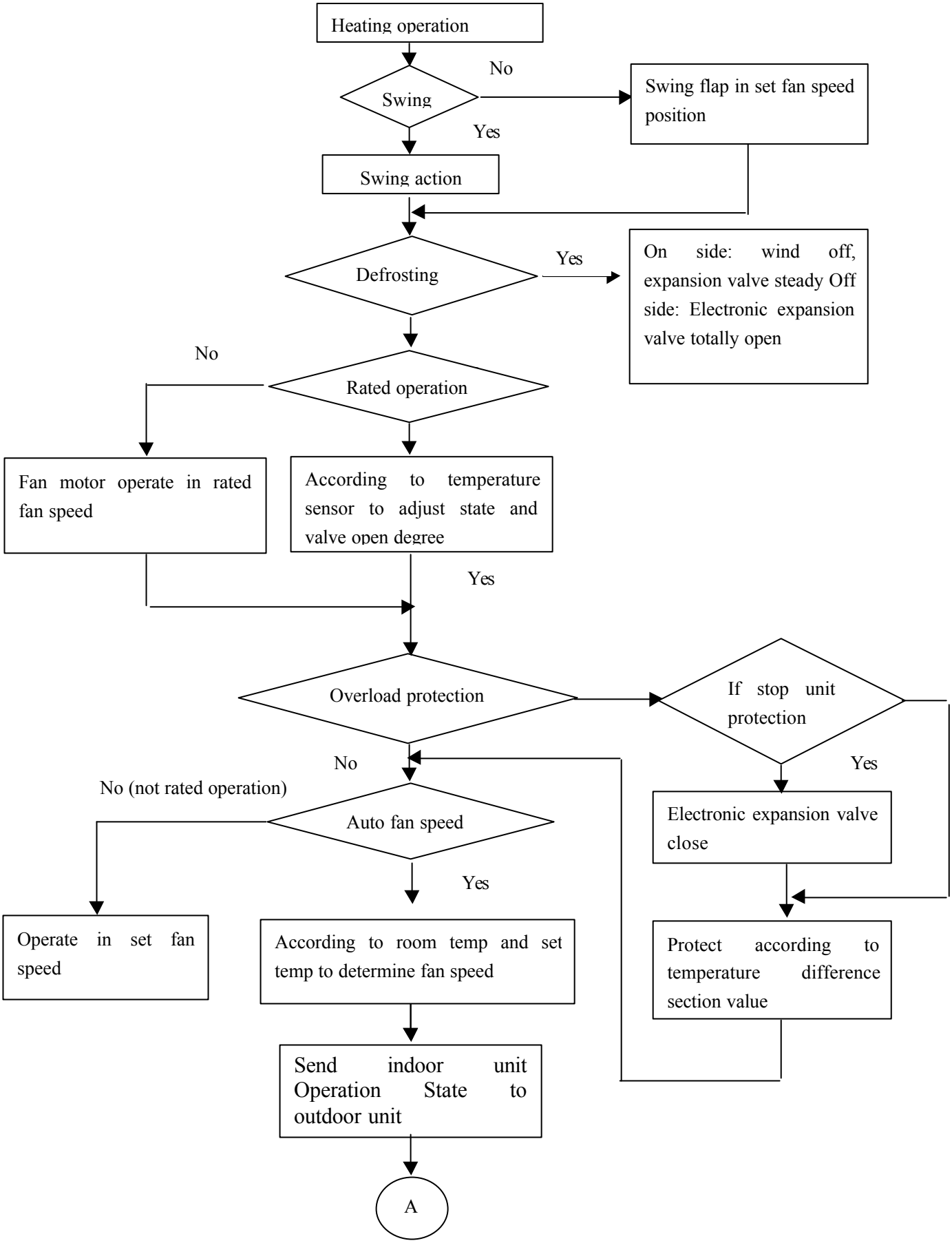
Note: 1. When abnormal phenomenon occur, the indoor unit indicator will indicate abnormality according to the abnormal parts.

2. When temperature of the evaporator inlet is lower than 0℃ and keeps for 5 minutes, unit will operate in anti-icing mode.

(4) Dehumidifying operation



(5) Heating operation



9.3 Defrost operation Flow Chart

1. The compressor operates heating over 25 minutes, after meeting the defrosting condition, it is permitted to enter defrosting. Defrosting process is unit-stop defrosting mode. Determining condition of defrosting is as follows:

Unit-stop defrosting:

(1) When outdoor ambient temperature is less than 2℃, (outdoor ambient temperature-defrosting sensor) is more than 9 , and keeping over 2 minutes, enter unit-stop defrosting.

(2) Outdoor ambient temperature >2℃, pipe coil temperature <15℃ enter unit-stop defrosting.

(3) If meeting the above condition, enter unit-stop defrosting.

(4) First the outdoor unit sends defrosting signal to indoor unit, after receiving signal, the indoor unit acts according to the following condition:

a. The running fan motor of indoor unit for heating stops; the electronic expansion valve does not change.

b. The running fan motor of indoor unit for turning off unit stops; the electronic expansion valves of indoor unit are totally open.

(5) The defrosting action of outdoor unit:

a. The electronic expansion valves are totally open; compressor stops; 4-way valve keeps in heating state; fan motor of outdoor unit is turned off.

b. After 45 seconds, 4-way valve is closed; compressor operates in 58Hz frequency.

c. After the compressor has operated in 58Hz for 30 seconds, it will operate in 120Hz. Only after 3 minutes have elapsed in defrosting state can it quit from this operation.

(6) The condition of quitting from defrosting:

a. After entering defrosting for 3 minutes, test the temperature of defrosting sensor, continue for 1 minute over 12℃, then quit from defrosting.

b. Or after continuously defrosting for over 9 minutes, then quit from defrosting.

c. Discharging air pressure over 2MPaG (G stands for this pressure is piezometer pressure), defrosting over 1 minute.

(7) Actions of indoor & outdoor unit when quitting from defrosting:

a. Compressor stops 43 seconds, fan motor of outdoor unit enter set fan speed according to the state before entering defrosting.

b. After stop 45 seconds, compressor starts, simultaneously 4-way valve enters heating.

c. The open state of outdoors electronic expansion valve enters the state before entering defrosting.

d. Indoor fan speed works in anti-cool Air State.

e. The open state of indoors electronic expansion valve is controlled to start adjusting after defrosting 4 minutes.

(8) The protective treatment in defrosting:

a. Pressure switch not protected

b. The protective function of any temperature sensors is cancelled.

c. After finishing defrosting, discharging air temperature and adjustment of expansion valve open state, current protection etc. work should be carried out according to the state when compressor is just turned on.

2. Compressor control

The compressor will start at 10Hz and running between 30Hz to 120Hz. In operation the compressor running frequency is determined by three elements : the number of indoor units in operation , the temperature difference of each indoor units between setting temperature and room temperature , the size of each indoor unit.

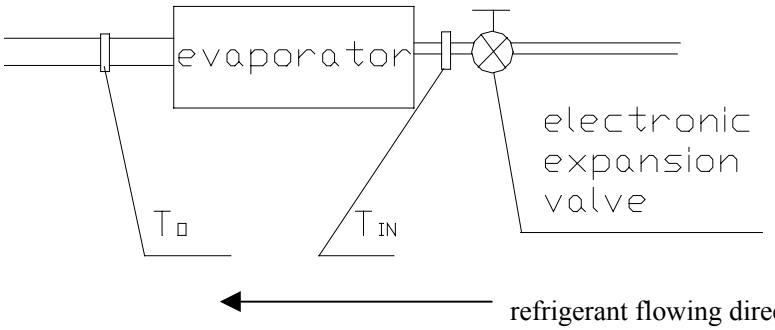
3. Outdoor fan motor speed control

(Ta: ambient temperature , Tp: outdoor unit pipe temperature)

ITEM	MODE	T_a	Tp	FAN SPEED
1	cooling	＞32℃		H
2	cooling	＜31℃	＞45℃	H
3	cooling	＜31℃	40℃＜T_p＜44℃	M
4	cooling	＜31℃	T_p＜39℃	L
5	heating	＞15℃		L
6	heating	10℃＜T_a＜14℃		M
7	heating	＜9℃		H

4 Electronic expansion valve control

Each indoor unit has a electronic expansion valve to control refrigerant volume. For split type indoor unit, the valve is designed in a electronic expansion valve box. Indoor unit PCB communicates with the electronic valve box PCB. For other type , the valve is in the indoor unit itself. The electronic expansion valve is controlled as follows:



Tin: stands for the liquid refrigerant temperature ; To: stands for the gas refrigerant temperature Tov: overheat temperature

Overheat temperature is preset in indoor unit PCB. In cooling mode operation ,indoor unit PCB can detect the current overheat temperature by calculating To-Tin.If the To-Tin temperature is higher than Tov, the valve volume will become larger until To-Tin= Tov. In heating operating ,outdoor PCB will control outdoor electronic valve accordingly.

5 All indoor units must operate in the same mode. If the compressor is in heating mode, the indoor unit is not allowed to be set in cooling mode, the outdoor unit will not accept different running mode from indoor unit.

10 DIAGNOSTIC INFORMATION (TROUBLE SHOOTING)

10.1 Fault Codes

In order to make repair and maintenance convenient, we set "Automatic troubleshooting" function in indoor unit and centralized controller. If any abnormal phenomenon occurs in operation, you can determine the trouble part and condition from the display on the LED of outdoor PCB, or the trouble code on the wired controller.

Remote controller Timer and Operation indicator malfunction code

When the unit running, Timer indicator flash stand for indoor unit malfunction operation indicator flashing stand for outdoor unit malfunction：

Indoor unit malfunction

Timer indicator Flashing times	Indoor unit malfunction
Flashing once	The liquid tube temperature sensor is abnormal
Flashing twice	The gas tube temperature sensor is abnormal
Flashing 3 times	The environment temperature sensor is abnormal
Flashing 4 times	The communication with outdoor unit is abnormal
Flashing 5 times	The communication with the electronic expansion valve control board is abnormal
Flashing 6 times	The communication between indoor 846 and communication chip is abnormal
Flashing 8 times	PMV strong electricity board is abnormal
Flashing 10 times	Indoor unit PG fan motor is abnormal
Flashing 11 times	Indoor unit water overflow or float switch is abnormal
Flashing 12 times	Indoor unit EEPROM data is abnormal
Flashing 13 times	Indoor unit is overload
Flashing 14 times	The communication between indoor unit and wire remote controller is abnormal

Wired controller and malfunction code

Indoor unit malfunction display code

Indoor unit malfunction	Display code
Float switch or water motor abnormal	E0
Outdoor unit abnormal	E1
Setting running mode is different with outdoor running mode	E2
Liquid temperature sensor is abnormal	E3
Gas temperature sensor is abnormal	E4
The communication between indoor 846 chip and communication chip is abnormal	E5
The communication with electronic expansion box is abnormal	E7
The communication between the wire remote controller and indoor unit control board is abnormal	E8
The communication between indoor and outdoor unit is abnormal	E9
Water temp. sensor is abnormal	EB

10.2 AU48- diagnostic information and trouble shooting

The failure code is displayed on the outdoor PCB; please diagnose the trouble according to the following code:

Failure code	Failure position	Judgment measure
01	Outdoor defrosting temp. sensor TE circuit	Examine the sensor below 20H in cut circuit or over 1000H in short circuit for continuous 60 seconds, recoverable
02	Ambient temp. sensor TA circuit	Examine the sensor below 20H in cut circuit or over 1000H in short circuit for continuous 60 seconds, recoverable
03	Suction temp. sensor TS circuit	Examine the sensor below 20H in cut circuit or over 1000H in short circuit for continuous 60 seconds, recoverable
04	Discharge temp. sensor TD circuit	Examine the sensor below 20H in cut circuit or over 1000H in short circuit for continuous 60 seconds after compressor working for 3 minutes, recoverable
05	Outdoor mid-condenser temp. sensor	Examine the sensor below 20H in cut circuit or over 1000H in short circuit for continuous 60 seconds, recoverable
06	Over current	Alarm over current failure, on exceeding current protection value C for 5 seconds. After occurrence 3 times in 30 minutes, failure code displays on the LED, unrecoverable
07	Current mutual inductance circuit	After closing compressor, the current of current mutual inductance is checked over 15A. when starting up the compressor, frequency is over 60HZ, and current is below 5A, recoverable
08	Inverter compressor built-in over-load protection circuit	Inverter compressor built-in over-load protector acts.
09	IPM protection	IPM over current、short current、temp. too high、lack of pressure protect alarm 3 times continuously in 30 minutes, unrecoverable
10	EEPROM on PCB faulty	857 reads and writes the data of EEPROM faulty, flashes 11 times, unrecoverable
11	Discharge temp. sensor protection acts (TD)	Examine TD1 sensor alarms compressor off after 5 seconds at over 120℃, confirming 3 times in 30minutes, and displaying 11 on the LED, unrecoverable
12	Pressure sensor （Pd、Ps） wiring faulty	After compressor starting up 3 minutes, examine compressor rate(Pd/Ps) is below 0.9 for continuous 60 seconds, recoverable
13	Pressure switch circuit	High pressure switch acts, trouble disappears after 2

		minutes normally
14	Low pressure protection acts （Ps）	Cooling: examine Ps below 0.2kgG/cm^2 for 30 seconds continuously after compressor starts up; Heating: examine Ps below -0.2kgG/cm^2 for 10 minutes continuously after compressor starts up; recoverable
15	High pressure protection acts （Pd）	Examine sensor Pd over 27.5kgG/cm^2
16	Suction temp. protection acts （TS）	On compressor working, for continuous 10 minutes, examine sensor TS over 40℃, recover after 2 minutes.
17	High pressure sensor Pd circuit	For continuous 60 seconds, examine sensor Pd can automatically run in support.
18	Low pressure sensor Ps circuit	For continuous 60 seconds, examine sensor Ps below -0.95kgG/cm^2 or on inverter compressor running individually ,when performance frequency is below S3, examine sensor Ps is over 9kgG/cm^2, can automatically run in support.
19	At low frequency, discharging temp. protection acts（TD）	When inverter compressor performance frequency is S3,S4, examine sensor TD1 is over 110℃
20	857 receive 846 communication faulty	Continuous communication 200 seconds invalid, alarms flashes.
21	846 receive 857 communication faulty	Continuous communication 200 seconds invalid, alarms on LED
22	846 receive indoor unit failure	Can not receive any signal from indoor unit for 4 minutes, alarms 22 on LED
23	846EEPROM/857EEPROM failure	Alarms display on LED

Remarks: 1.H in “20H” and “1000H” stands for 20 and 1000 in hex.

2.IPM stands for inverter power module.

3.EEPROM is Electrically Erasable Programmable Read-Only Memory, which is in the chip.

4. 857 and 846 are the chip, 857 is in charge of control function, while 846 is in charge of communication function.

5.S3 and S4 are the special frequency, S3 is 30Hz, while S4 is 38Hz.

10.3 Troubleshooting

(1) Indoor unit trouble indication: timer indicator flashes (once, twice, 3 times, 7 times)
Abnormal reasons:
Heat sensitive resister is short circuit or open circuit
The treatment to sensor output part in PC board is improper, such as poor contact of package part, the electrolytic capacitor for filtering is failed, etc.
Treatment:
Remove the heat sensitive resister, test and measure its numerical value. According to the resister temperature character table to evaluate if it is heat sensitive resister abnormal. If numerical value of resister is normal, check if it is poor contact. If contact is good, replace the indoor unit PC board.
(2) Outdoor unit trouble indication: timer indicator flashes (4 times)
Abnormal reasons:
Communication wire is open circuit or short circuit
There is powerful electromagnetic disturbing source near the air conditioner
The indoor & outdoor unit are not correctly set with unit number
The PC board is improper
Treatments: use the ohm grade of multimeter to check the numerical value of resister between communication wire to determine if it is short circuit or open circuit. If normal, examine if there is powerful electromagnetic disturbing source near the air conditioner, such as radio wave sending devices. After verifying there is no powerful disturbance near air conditioner, reset the unit number of indoor unit and outdoor unit. If there is still abnormal, change the PC board of the trouble indoor & outdoor unit. Please note that after changing the PC board of indoor & outdoor unit, they both should be reset their unit number.
(2) Indoor unit trouble indication: timer indicator flashes (5 times)
Abnormal reasons:
Communication wire is open circuit or short circuit
There is powerful electromagnetic disturbing source near the air conditioner
PC board is improper
Treatments: use the ohm grade of multimeter to check the numerical value of resister between communication wire to determine if it is short circuit or open circuit. If normal, examine if there is powerful electromagnetic disturbing source near the air conditioner, such as radio wave sending devices. After verifying there is no powerful disturbance near air conditioner, change the PC board of abnormal indoor unit or electronic expansion valve driver.
(3) Indoor unit trouble indication: timer indicator flashes (6 times)
Abnormal reasons:
PC board is improper
Treatment: change the improper PC board of indoor unit.
(4) Indoor unit trouble indication: timer indicator flashes (8 times)
Abnormal reasons:
The PC board of electronic expansion valve driver is improper
Treatment: change the PC board of electronic expansion valve driver.
(5) Indoor unit trouble indication: timer indicator flashes (10 times)
Abnormal reasons:
Plastic sealed motor is improper
PC board is improper

Treatment: use the DC voltage grade of multimeter to test the plastic sealed motor to find if there is any feedback signal, determine if the plastic sealed motor is abnormal. If normal, change the indoor unit PC board.

(6) Indoor unit trouble indication: Timer indicator flashes (12 times)

Abnormal reason:

Indoor unit PC board is improper

Treatment: change the improper indoor unit PC board.

(7) Indoor unit trouble indication: operation indicator flashes (once, twice, 3 times, 4 times, 5 times)

Abnormal reasons:

Heat sensitive resister is short circuit or open circuit

The treatment to sensor output part in PC board is improper, such as poor contact of package part, the electrolytic capacitor for filtering is failed, etc.

Treatment:

Remove the heat sensitive resister, test and measure its numerical value. According to the resister temperature character table to evaluate if it is heat sensitive resister abnormal. If numerical value of resister is normal, check if it is poor contact. If contact is good, replace the indoor unit PC board.

(8) Indoor unit trouble indication: operation indicator flashes (6 times)

Abnormal reasons:

Power voltage is low

Power is instantaneously stopped

Compressor is locked

Treatment: power on again to operate unit, check power voltage (Is the over 40A power used?)

(9) Indoor unit trouble indication: operation indicator flashes (7 times)

Abnormal reasons:

Power voltage is low

Power is instantaneously stopped

Treatment: Treatment: power on again to operate unit, check power voltage (Is the over 40A power used?), check if the power cord is too thin.

(11) Indoor unit trouble indication: operation indicator flashes (8 times)

Abnormal reasons:

The current mutual inductor on the outdoor unit PC board is failed

The driving circuit of compressor is disconnected

Treatment: power on again to operate unit. Test if there is current through the compressor driving circuit. If there is, change the PC board.

(12) Indoor unit trouble indication: operation indicator flashes (9 times)

Abnormal reasons:

High load compelling operation

Power voltage is low

Power is instantaneously lowered or power cut

The driving circuit of compressor is short circuit

Compressor is locked

Treatment: power on again to operate unit. Check if there is too much refrigerant in the cooling system? Check power voltage (Is over 40A power used?) check if there are parts in compressor driving circuit short-circuited? Check if there is any parts damage, poor contact, pull out the connection wire of power module UVW end, test if there is the same voltage between U-V, V-W, W-U? (AC80V-280V)

(13) Indoor unit trouble indication: operation indicator flashes (10 times)

Abnormal reason: PC board of outdoor unit is improper.

Treatment: change PC board of outdoor unit.

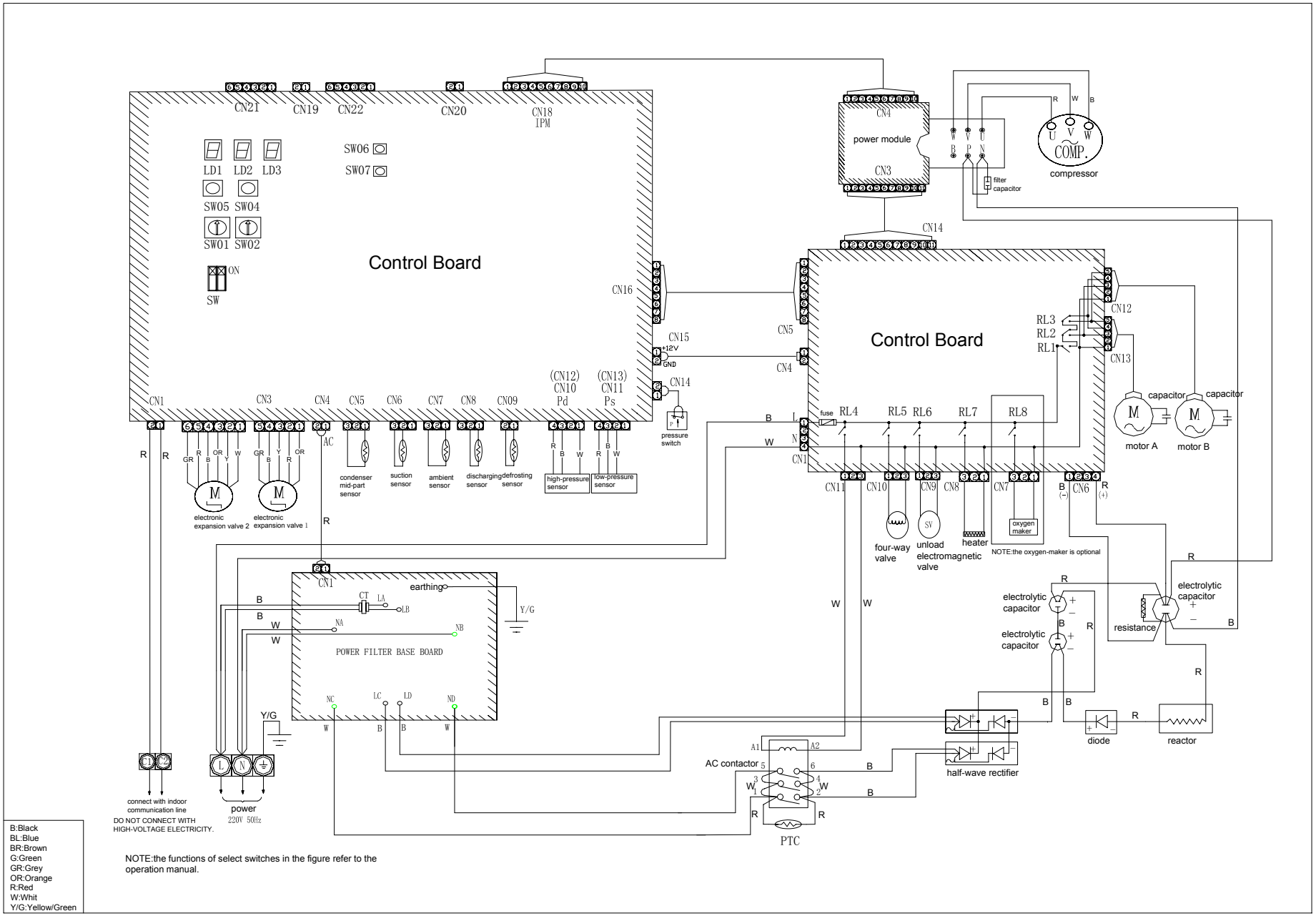
(14) Indoor unit trouble indication: operation indicator flashes (11 times)

Abnormal reasons:

System is high load compelling operated

Refrigerant leaks
Discharging air temperature heat sensitive resistor is improper
Electronic expansion valve or 2-way valve is closed
Treatment: check if there is leakage part, test system pressure in rated operation state to
determine if there is leakage? Check the state of electronic expansion valve and 2-way valve.
Test and measure the numerical value of discharging air temperature heat sensitive resister.

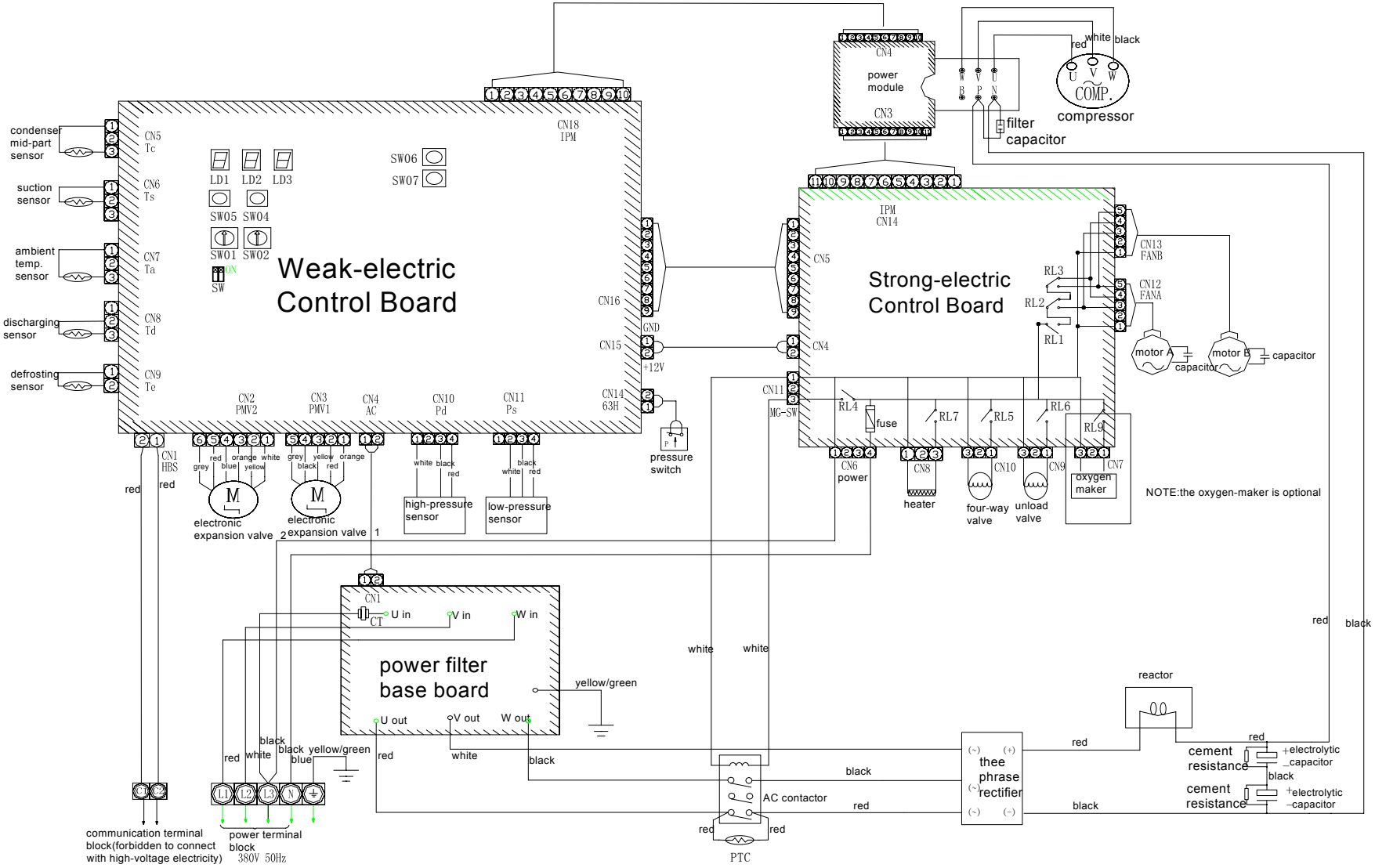
11.ELECTRICAL DATA



B:Black
BL:Blue
BR:Brown
G:Green
GR:Grey
OR:Orange
R:Red
W:Whit
Y/G:Yellow/Green

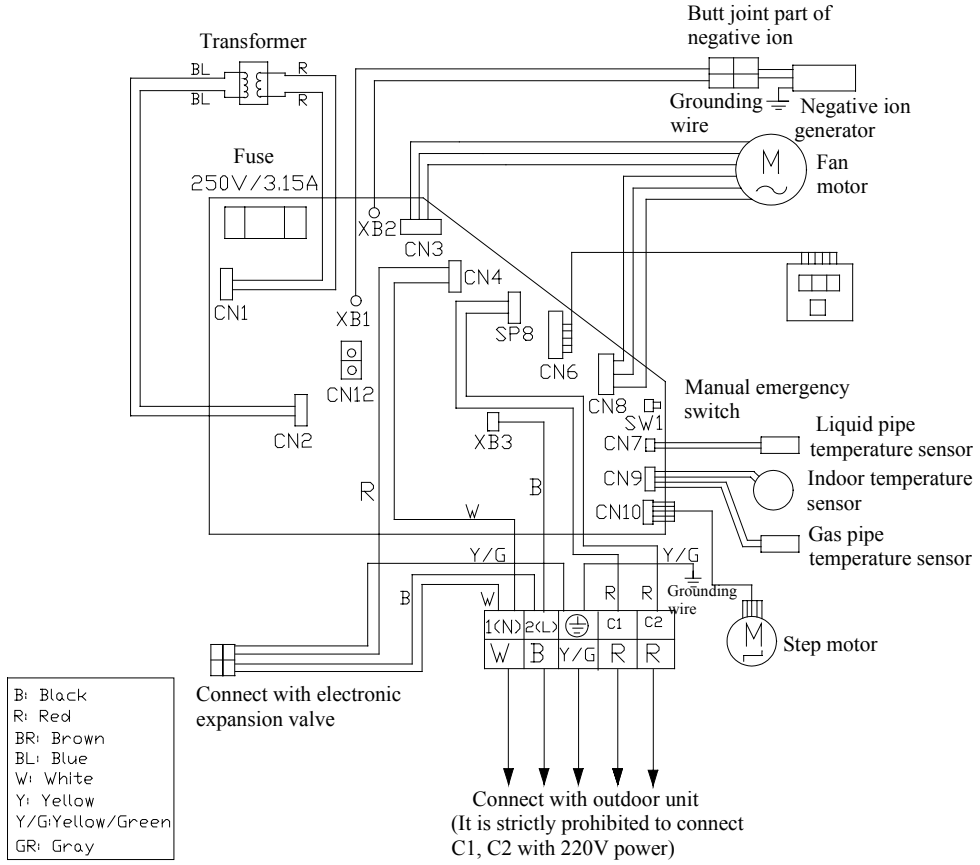
NOTE:the functions of select switches in the figure refer to the operation manual.

AU48NFIAIA

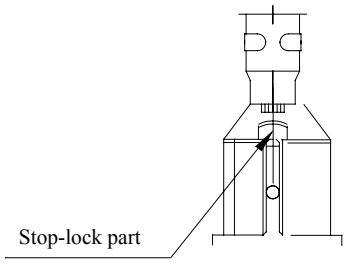

Weak-electric Control Board
Strong-electric Control Board
power filter base board
power module
compressor
COMP.
filter capacitor
condenser mid-part sensor
suction sensor
ambient temp. sensor
discharging sensor
defrosting sensor
pressure switch
high-pressure sensor
low-pressure sensor
electronic expansion valve 2
electronic expansion valve 1
motor A
motor B
capacitor
fuse
heater
four-way valve
unload valve
oxygen maker
NOTE:the oxygen-maker is optional
reactor
cement resistance
thee phrase rectifier
AC contactor
PTC
communication terminal block(forbidden to connect with high-voltage electricity)
power terminal block 380V 50Hz

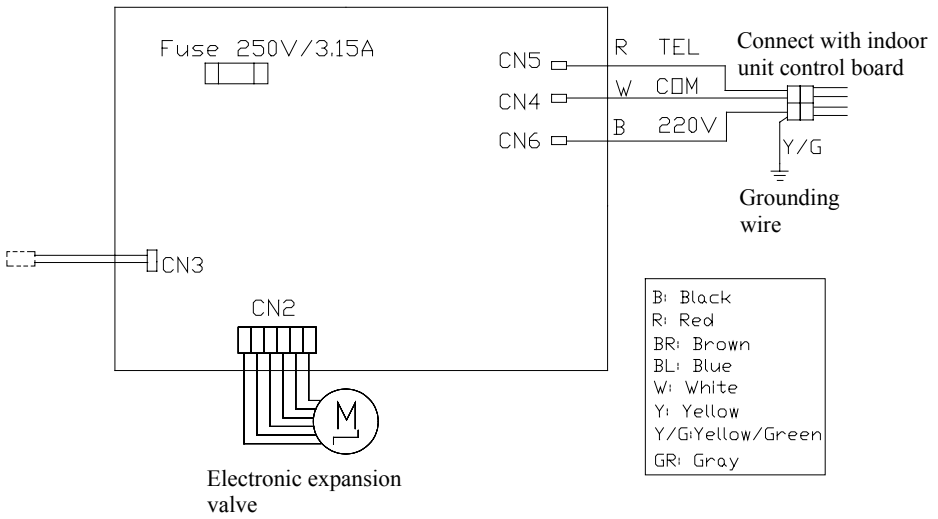
4.1.2 Indoor unit

1) Model: AS062FMAHA AS072FMAHA AS092FMAHA AS122FMAHA

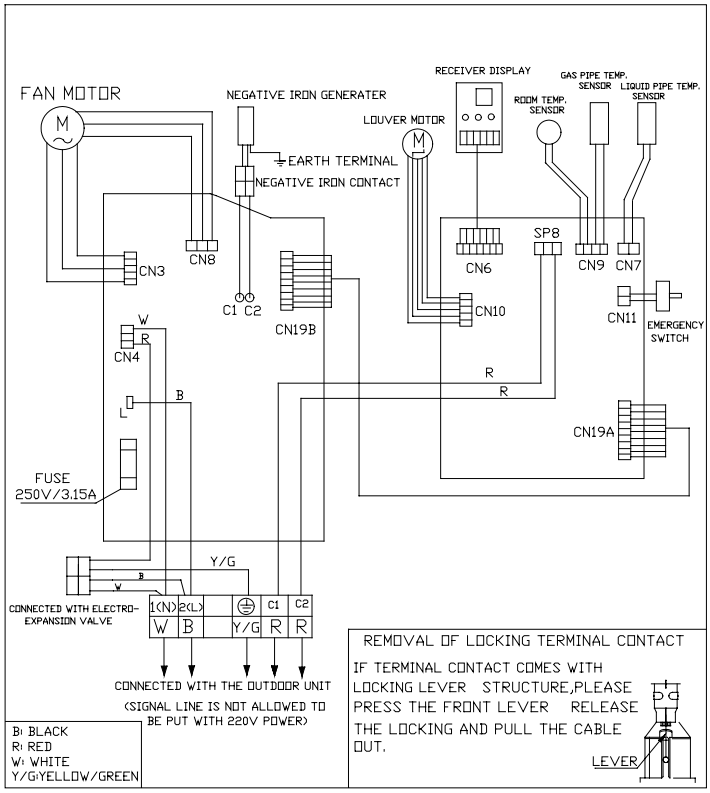


Pull-out method of package part: if the package part is self-lock terminal as shown in Fig., press the stop-lock part, then pull outward

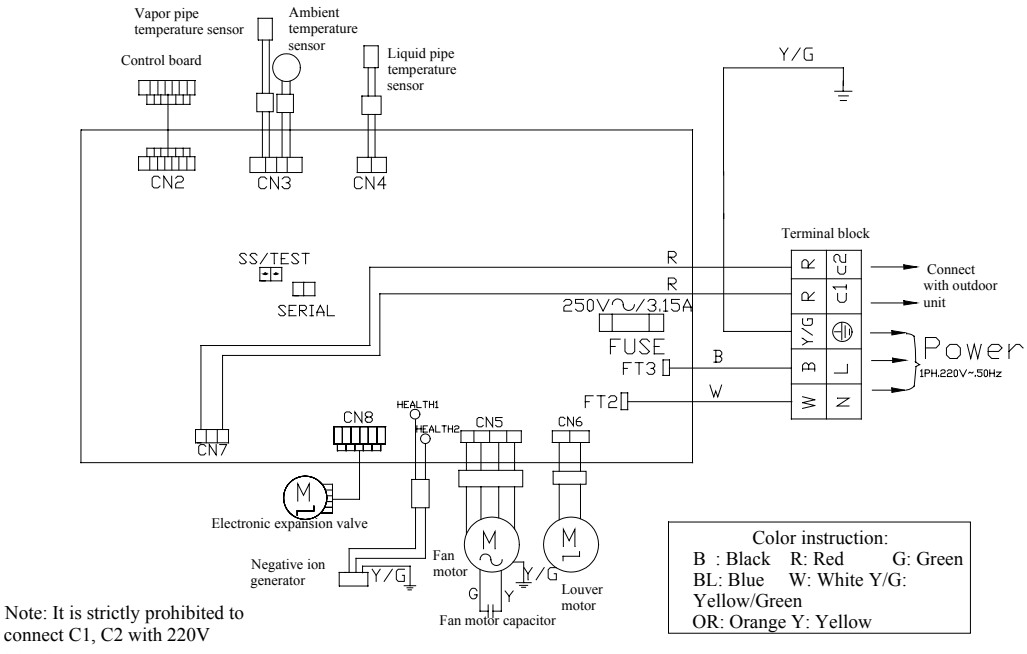




2) Model: AS182FTAHA

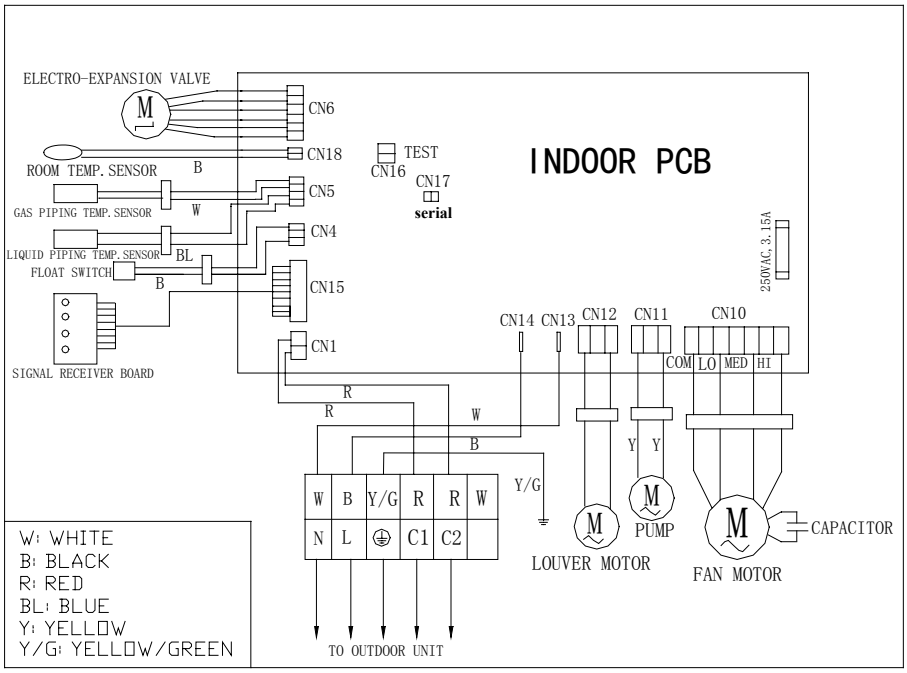


3) Model: AP182FAAHA

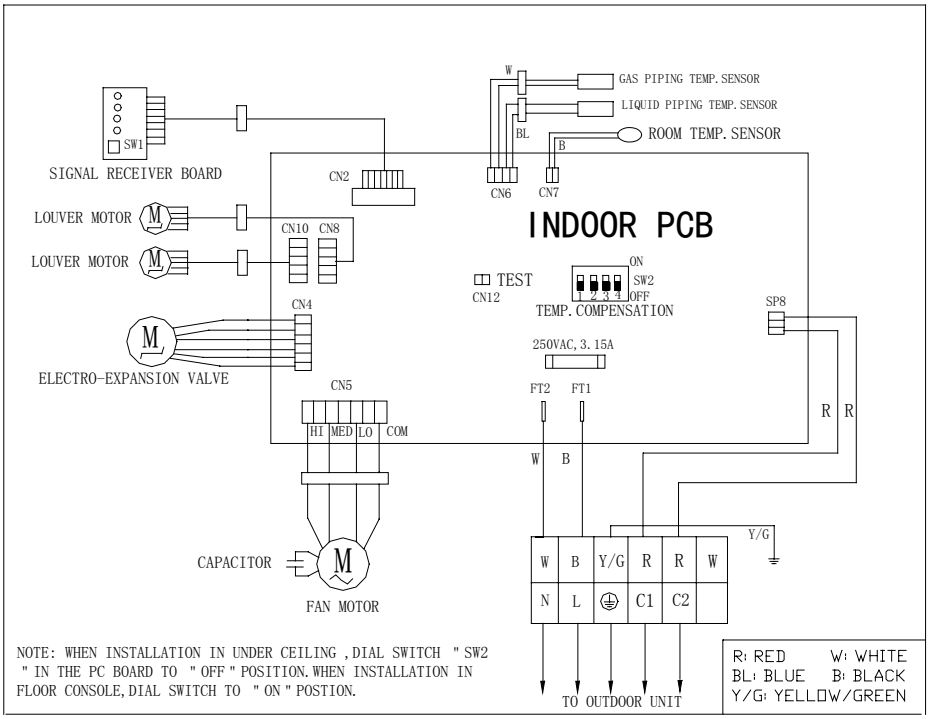


Note: It is strictly prohibited to connect C1, C2 with 220V power

4) Model: AB092FCAHA AB142FCAHA AB182FCAHA

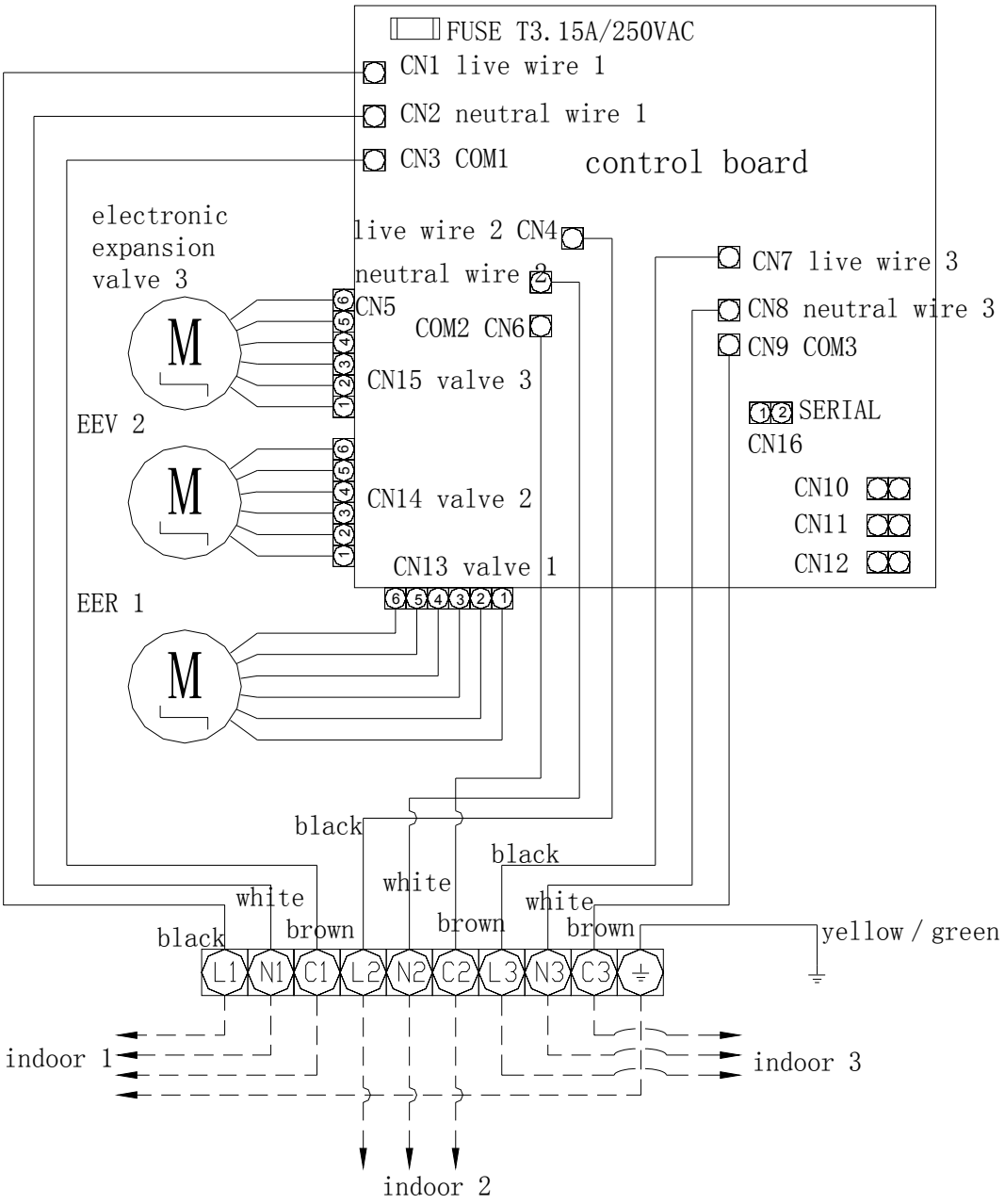


5) Model: AC182FCAHA



MP3 wiring diagram:

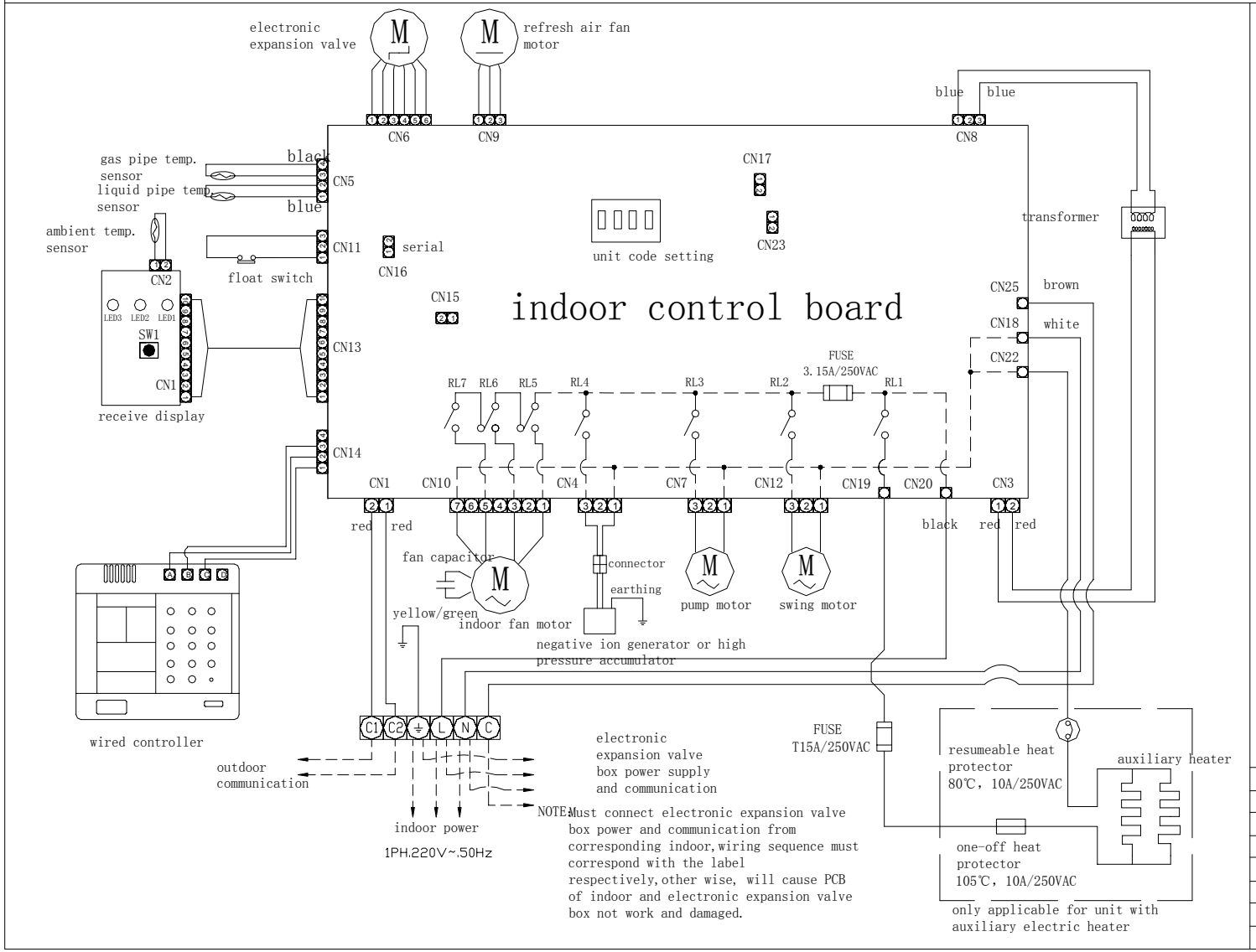
Electronic expansion valve wiring diagram



NOTE： Valve box power supply and communication wire must be connected with the corresponding indoor,wiring sequence must be correspondent respectively,L and N must not be connected reversely,otherwise will cause the unit not work and damaged.
On running, "indoor 1" must be electrified always,or air conditioner does not work normally.

AE072FCAKA、AE092FCAKA、AE122FCAKA、AE182FCAKA、AE212FCAKA、AE242FCAKA：

Indoor unit wiring diagram



NOTE:the dashed "———"in indoor controll board is PCB inner wiring.

About control board outer connector:

in the diagram,gas pipe temp. sensor 、liquid pipe temp. sensor、indoor fan motor 、transformer are necessary parts; wired controller、receive display、electronic expansion valve、float switch、pump motor 、swing motor are parts matched with the model(combined usage) ; auxiliary electric heater、refresh air fan motor、negative ion generator、high pressure accumulator are optional parts for health and comfort (combination usage arbitrarily).wired controller and receive display only can choose one at will.

the unit with remote controller is matched with receive display:

1.ceiling concealed type:CN11 must be short connected with a jump wire;

2.duct type: connected with float switch and pump motor;

3.cassette type:connected with float switch、pump motor and swing motor;

4.cabinet type:CN11 must be short connected with a jump wire, connected with swing motor;

the unit with wired controller(equipped with wired controller, can make remote operation on wired controller with remote controller such as YR-H39):

short connect CN15、CN17 together with jump wire, other parts are as the same as remote control unit.。

bulit-out electronic expansion valve setting(MP3): CN23 is cut circuit, CN25 is connected with electronic expansion valve communication,and the electronic expansion valve box(MP3) control indoor refrigerant flow.

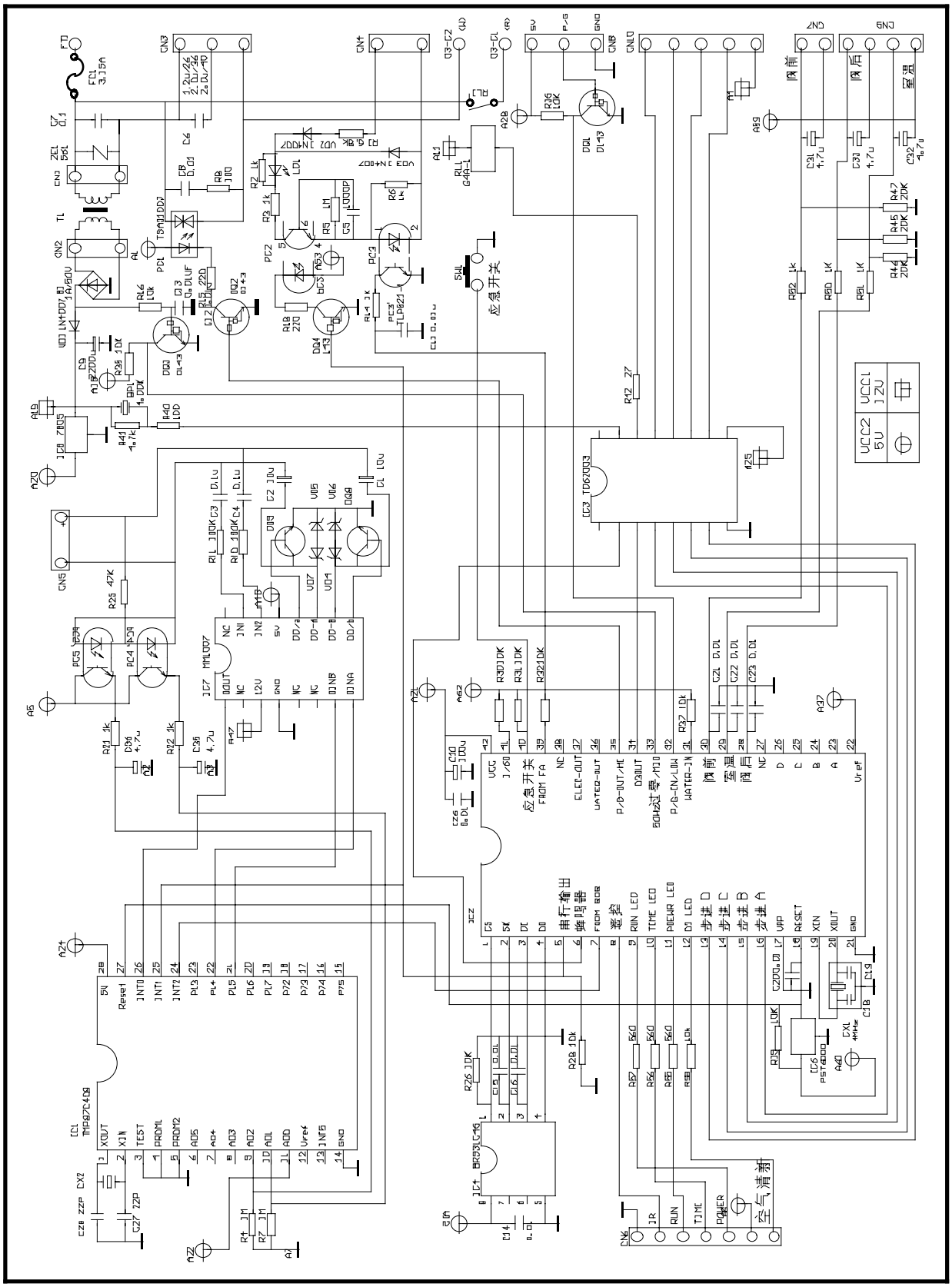
built-in electronic expansion valve setting: CN23 is short connected with a jump wire, CN6 is connected with electronic expansion valve, and indoor unit control refrigerant flow itself。

		SW1	emergency switch(ON/OFF)
		RL7	indoor fan motor low-speed relay
		RL6	indoor fan motor Mid-speed relay
		RL5	indoor fan motor High-speed relay
		RL4	health function module relay
LED3	indicator (running—red)	RL3	pump motor relay
LED2	indicator (timer—yellow)	RL2	swing motor relay
LED1	indicator (power—green)	RL1	auxiliary eletric heater relay

4.2 Circuit Diagram

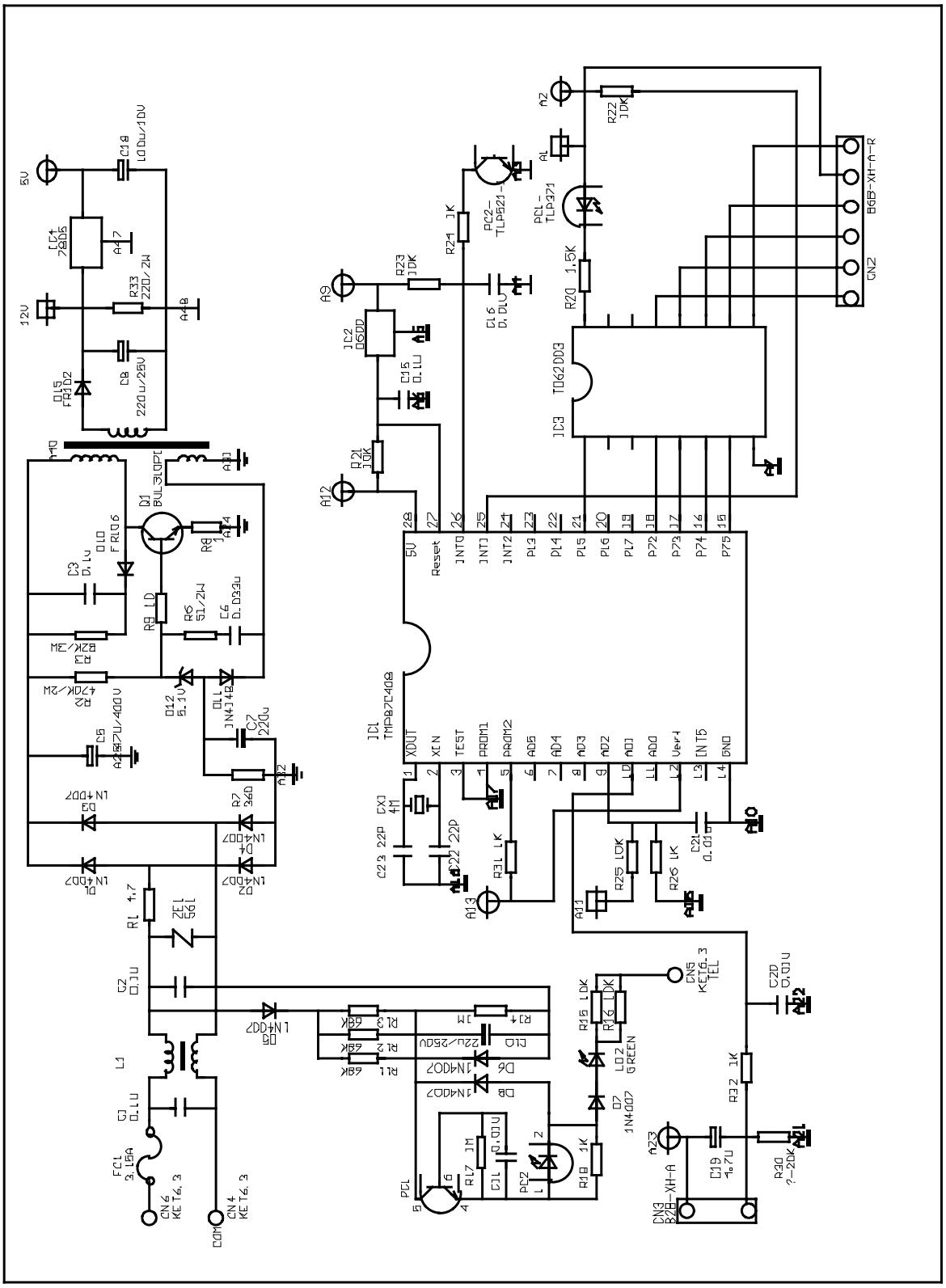
4.2.1 Indoor unit

Model: AS062FMAHA AS072FMAHA AS092FMAHA AS122FMAHA

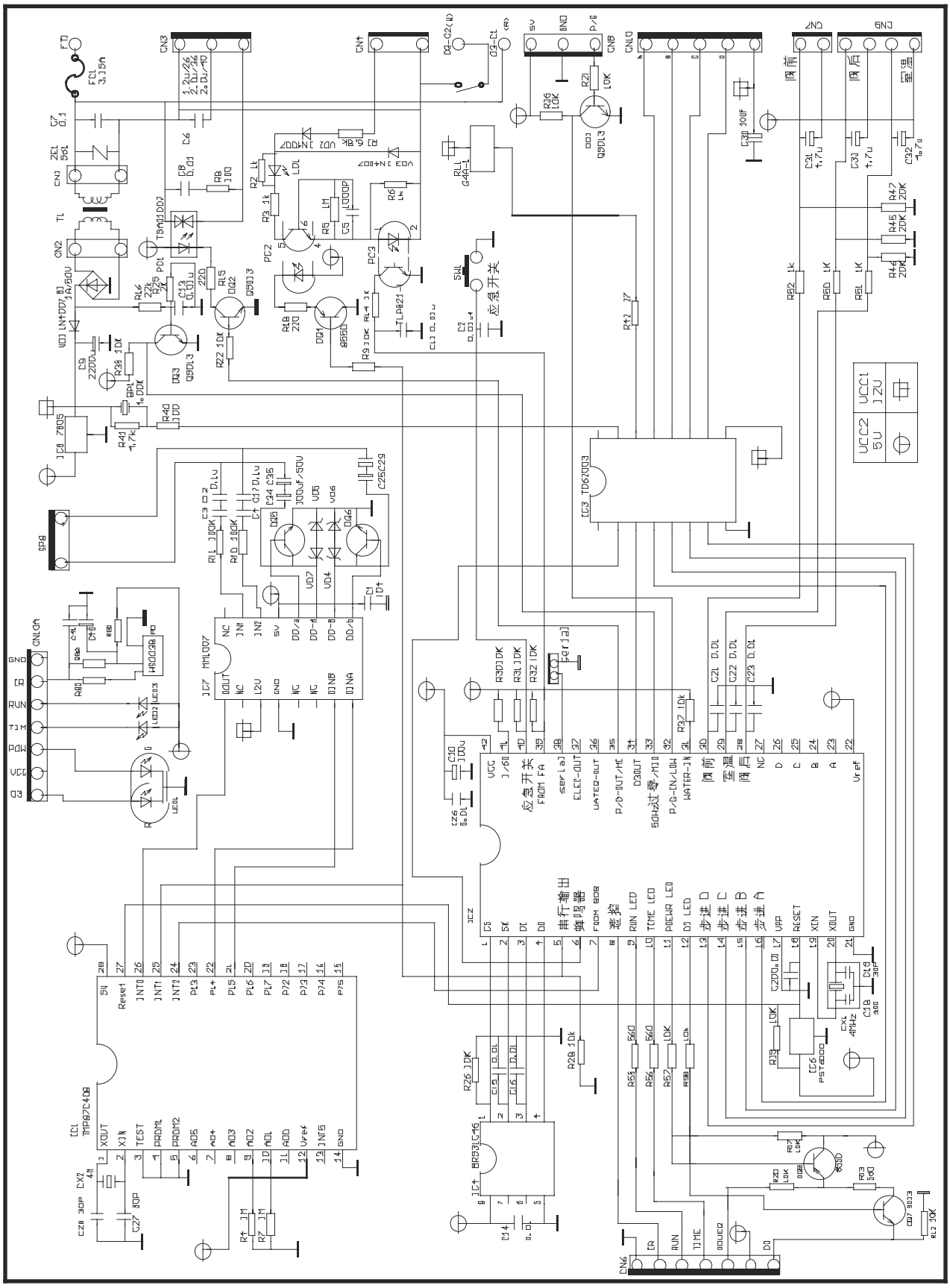


Model: expansion valve

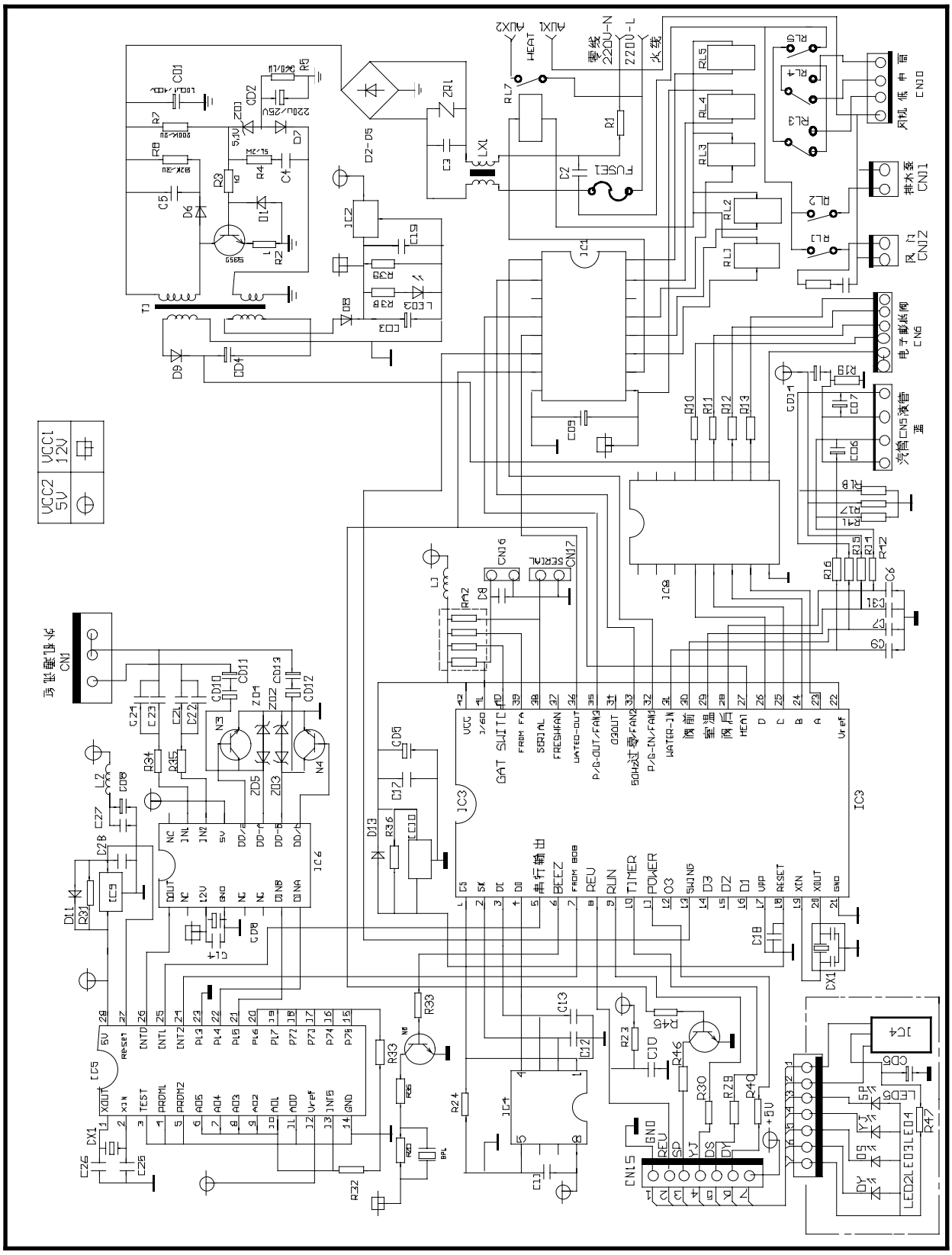
MRV circuit diagram of control board for electrical expansion valve



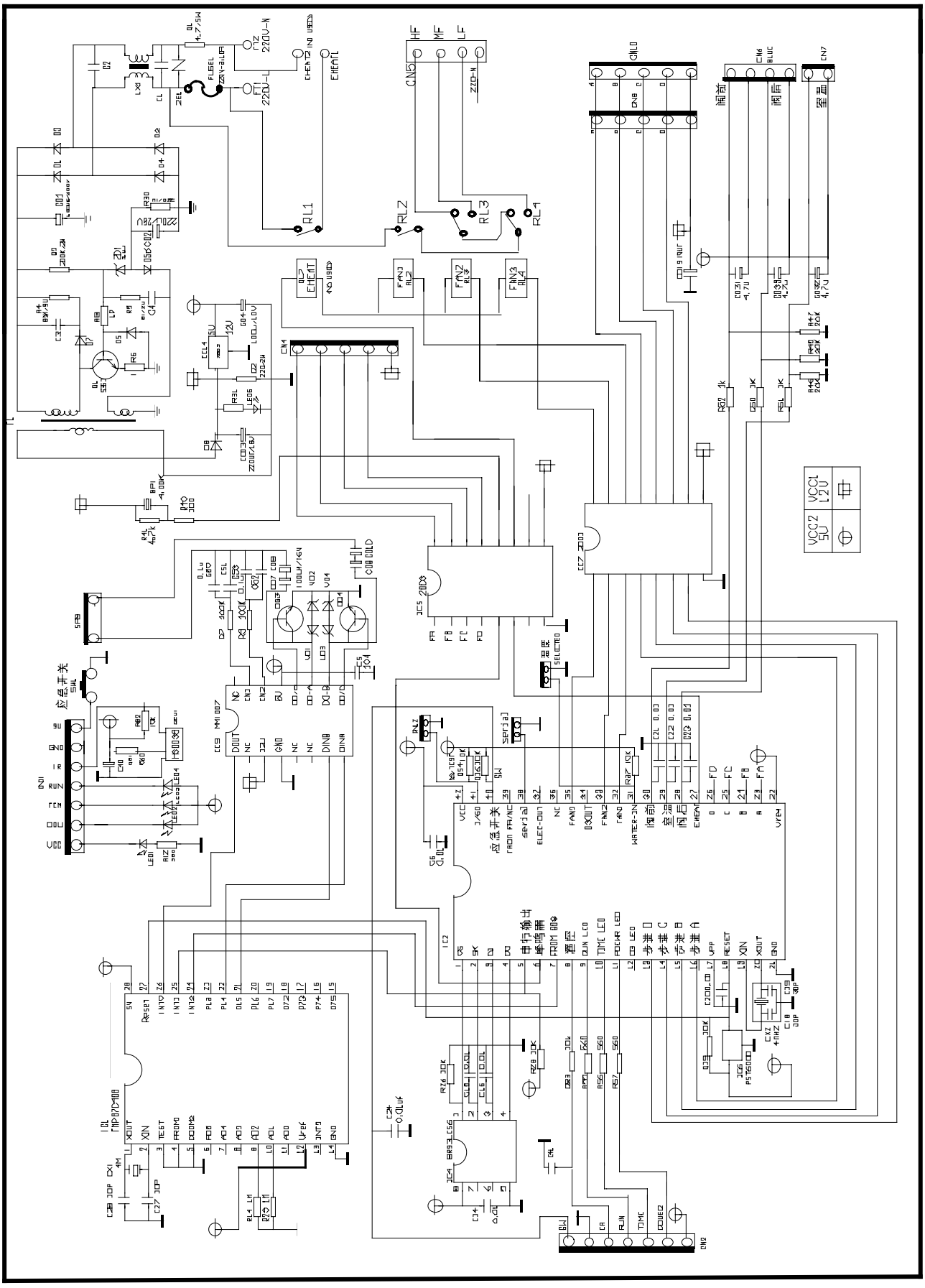
Model: AS182FTAHA



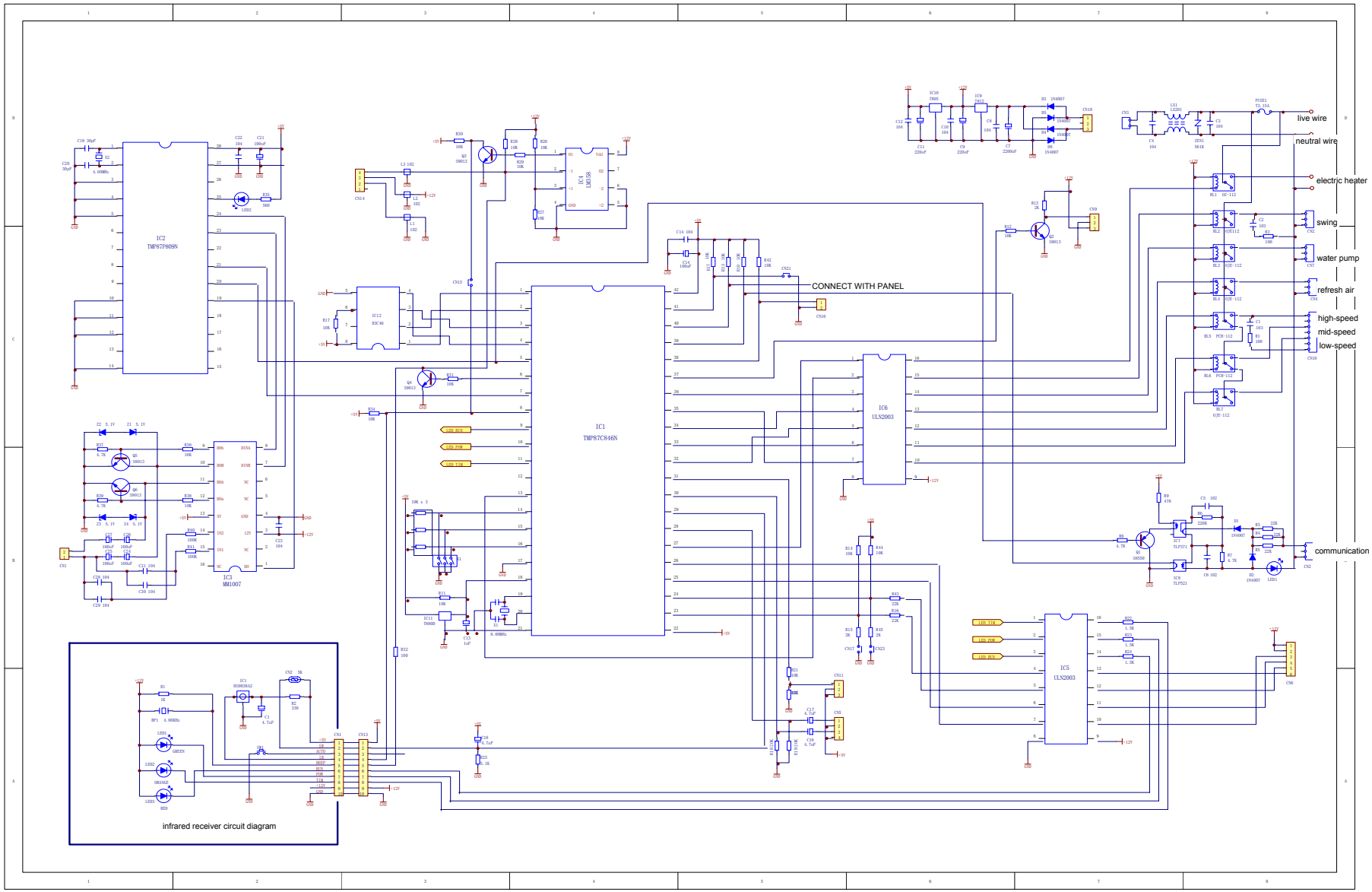
Model: AB092FCAHA AB142FCAHA AB182FCAHA



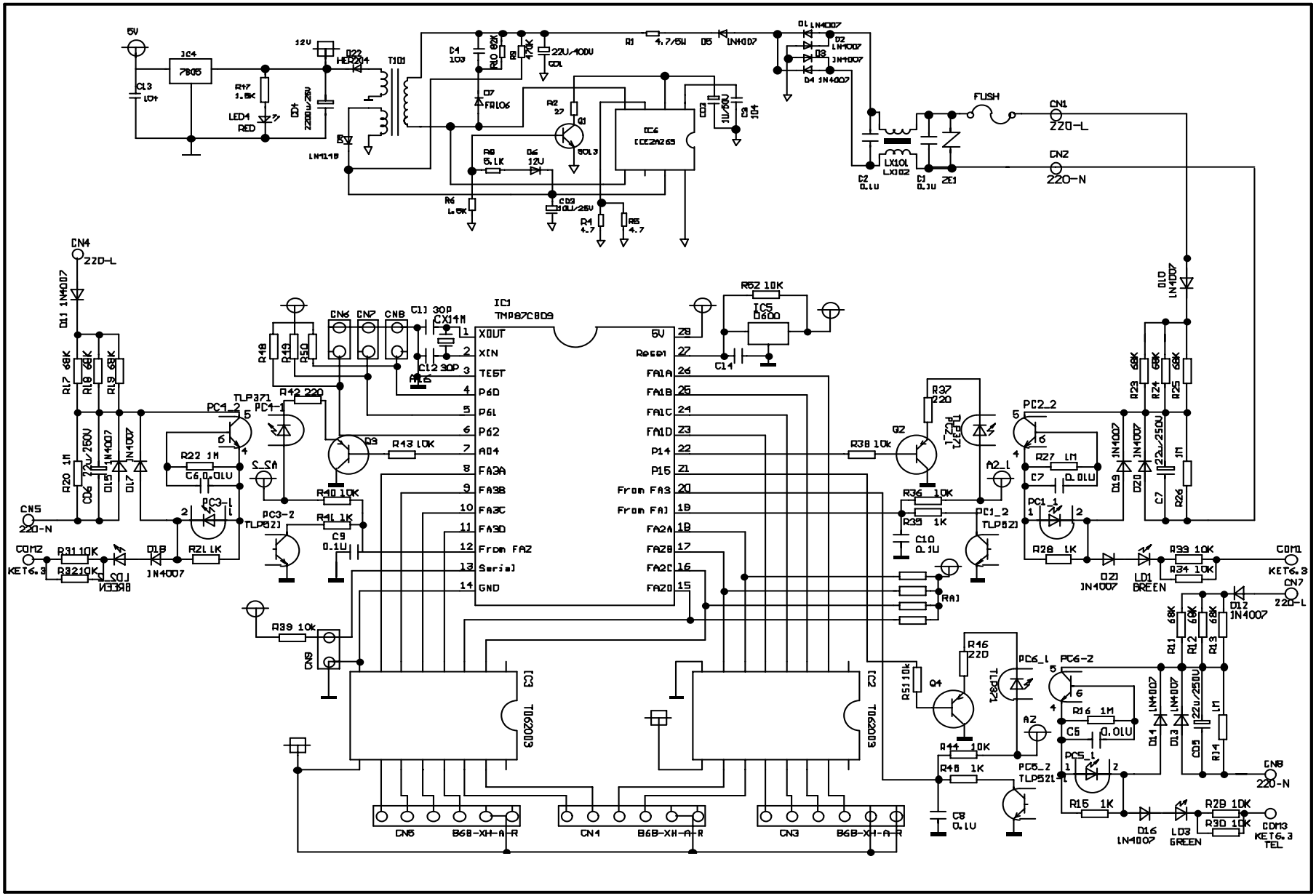
Model: AC182FCAHA



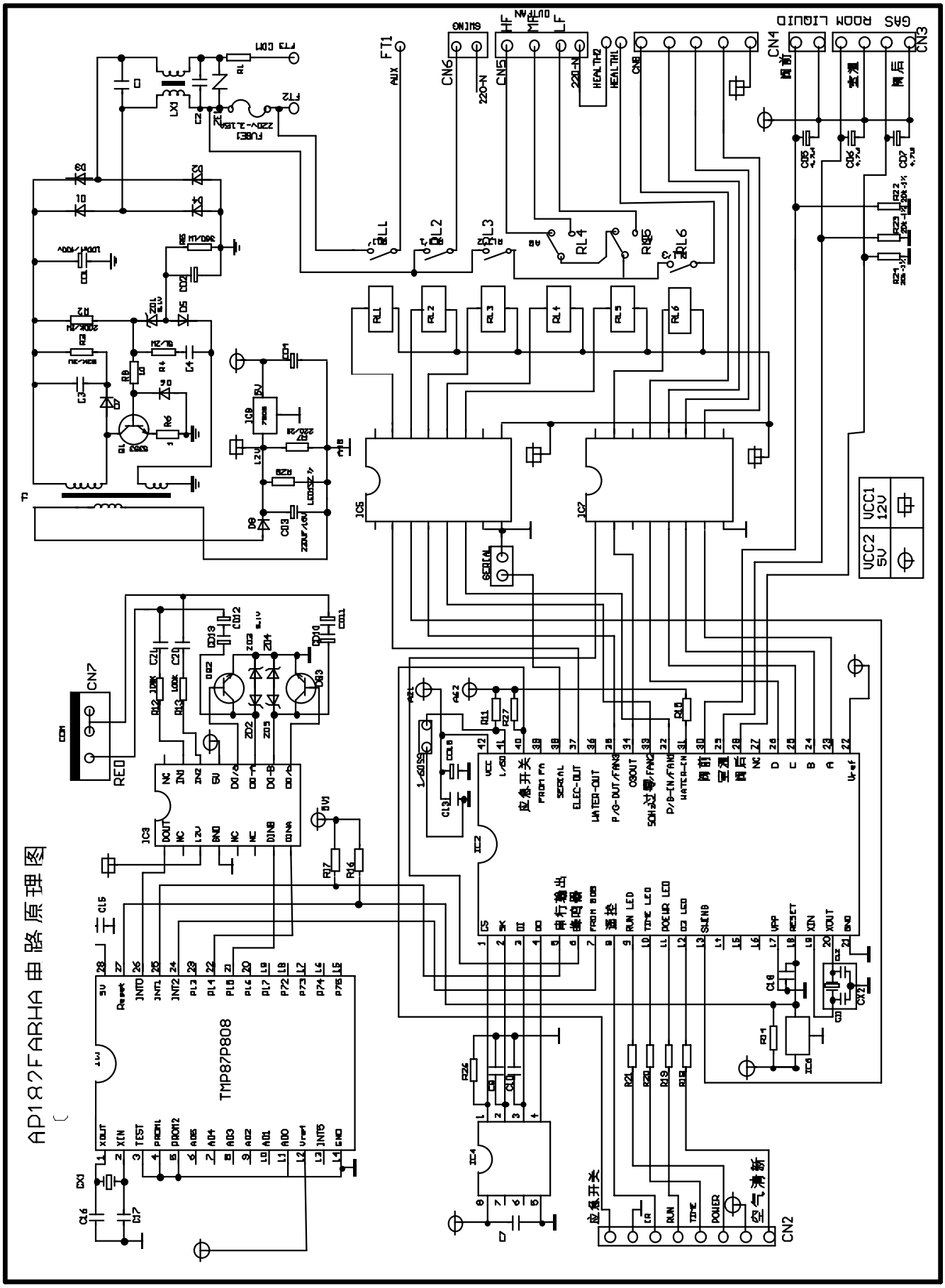
AE072FCAKA\AE092FCAKA\AE122FCAKA\AE182FCAKA\AE212FCAKA\AE242FCAKA Circuit diagram



MP3 circuit diagram:

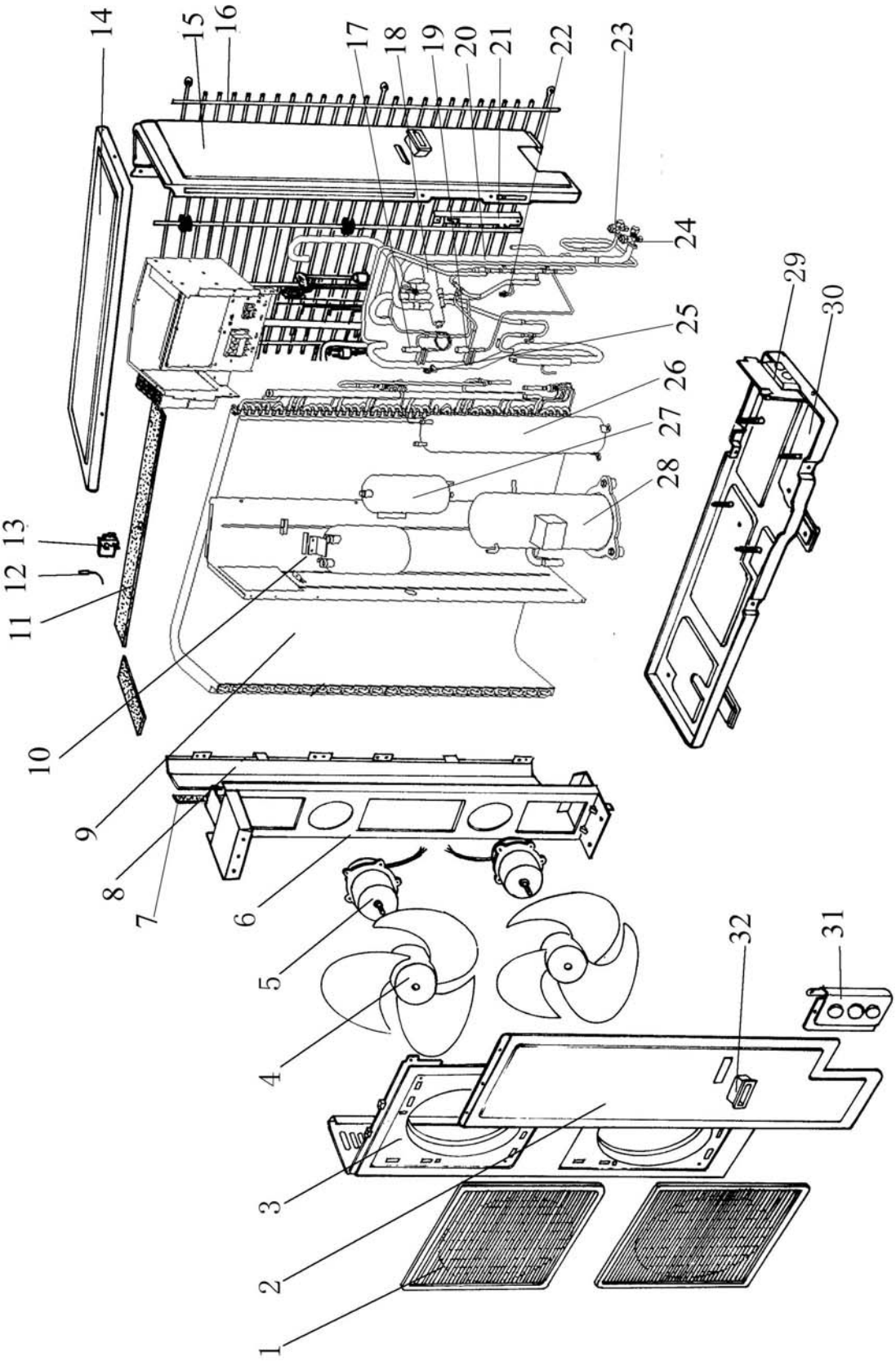


Model: AP182FAAHA



12 EXPLODED VIEWS & PART LISTS

12.1 Model: AU482FIAIA / AU48NFIAIA



Parts list

No.	Spare parts number	Spare parts description in English	Qty.	Model	Failure rate	the proportion of the spare-part stock	Remark
1	001A0100122	Front guard assy	2	AU482FIAIA	0.00%	0.000%	×
2	001A1301707	Plate for maintain	1	AU482FIAIA	0.00%	0.000%	×
3	001A1301640	Front panel(left)	1	AU482FIAIA	0.00%	0.000%	×
4	001A5402022	Axial Fan	2	AU482FIAIA	0.02%	0.024%	*
5	001A3000201	Motor	2	AU482FIAIA	0.02%	0.024%	*
6	001A0100498	Motor mounting plate	1	AU482FIAIA	0.00%	0.000%	×
7	001A17421215	PE	1	AU482FIAIA	0.00%	0.000%	×
8	0010150076	vertical plate	1	AU482FIAIA	0.00%	0.000%	×
9	0010750551	Outdoor heat exchanger	1	AU482FIAIA	0.01%	0.012%	
10	0010750761	segregator	1	AU482FIAIA	0.00%	0.000%	×
11	001A1754686	sealed pad	1	AU482FIAIA	0.00%	0.000%	×
12	0010450192	ambient temp. sensor	1	AU482FIAIA	0.00%	0.000%	×
13	001A5736055	clip for sensor	1	AU482FIAIA	0.00%	0.000%	×
14	001A0100827	cover	1	AU482FIAIA	0.00%	0.000%	×
15	001A1101197	right side plate	1	AU482FIAIA	0.00%	0.000%	×
16	001A0100767	guard for heat exchanger	1	AU482FIAIA	0.00%	0.000%	×
17	001A2500127	eletromagnetic valve	1	AU482FIAIA	0.00%	0.000%	×
18	0010450230	4-way valve	1	AU482FIAIA	0.00%	0.000%	×
19	001A2500147	eletronic expansion valve	1	AU482FIAIA	0.00%	0.000%	×
20	0010750580	pipe assy	1	AU482FIAIA	0.00%	0.000%	×
21	001A1301465	fixing plate	1	AU482FIAIA	0.00%	0.000%	×
22	0010450194	high pressure sensor	1	AU482FIAIA	0.00%	0.000%	×
23	0010750476	3-way stop valve	1	AU482FIAIA	0.00%	0.000%	×
24	001A2500116	3-way stop valve	1	AU482FIAIA	0.00%	0.000%	×
25	0010450195	low pressure sensor	1	AU482FIAIA	0.00%	0.000%	×
26	0010750474	high pressure storage	1	AU482FIAIA	0.00%	0.000%	×
27	0010750475	oil segregator	1	AU482FIAIA	0.00%	0.000%	×
28	0010750303	compressor	1	AU482FIAIA	0.06%	0.072%	*
29	001A1301762	valve support plate	1	AU482FIAIA	0.00%	0.000%	×
30	0010150080	bottom plate	1	AU482FIAIA	0.00%	0.000%	×
31	001A1301117	little plate	1	AU482FIAIA	0.00%	0.000%	×
32	001A1436160	handle	1	AU482FIAIA	0.00%	0.000%	×

1,The failer rate and the proportion of the spare-part stock are regarded as the reference of the stock for spare-parts;The first time should be stocked accroded with the proportion of the spare-parts,and it should be adjusted with the actual quantity 3 months later.

2,easy-damaged;The spare-part which is often damaged and the customer must stock in the spare-parts warehouse,and should be marked with"*"

3,possible damaged:The spare-part which is not often damaged like the easy damaged one and the customer may stock in the spare-part warehouse accord with the actual case,should be marked with " ".

4,not need provided :The spare-part which is seldom damaged or the maintenance man could not maitmains.The spare parts may be air freighted by the factory if they were damaged.The customer nees not stock in the spare-part warehouse,should be marked with " x ".

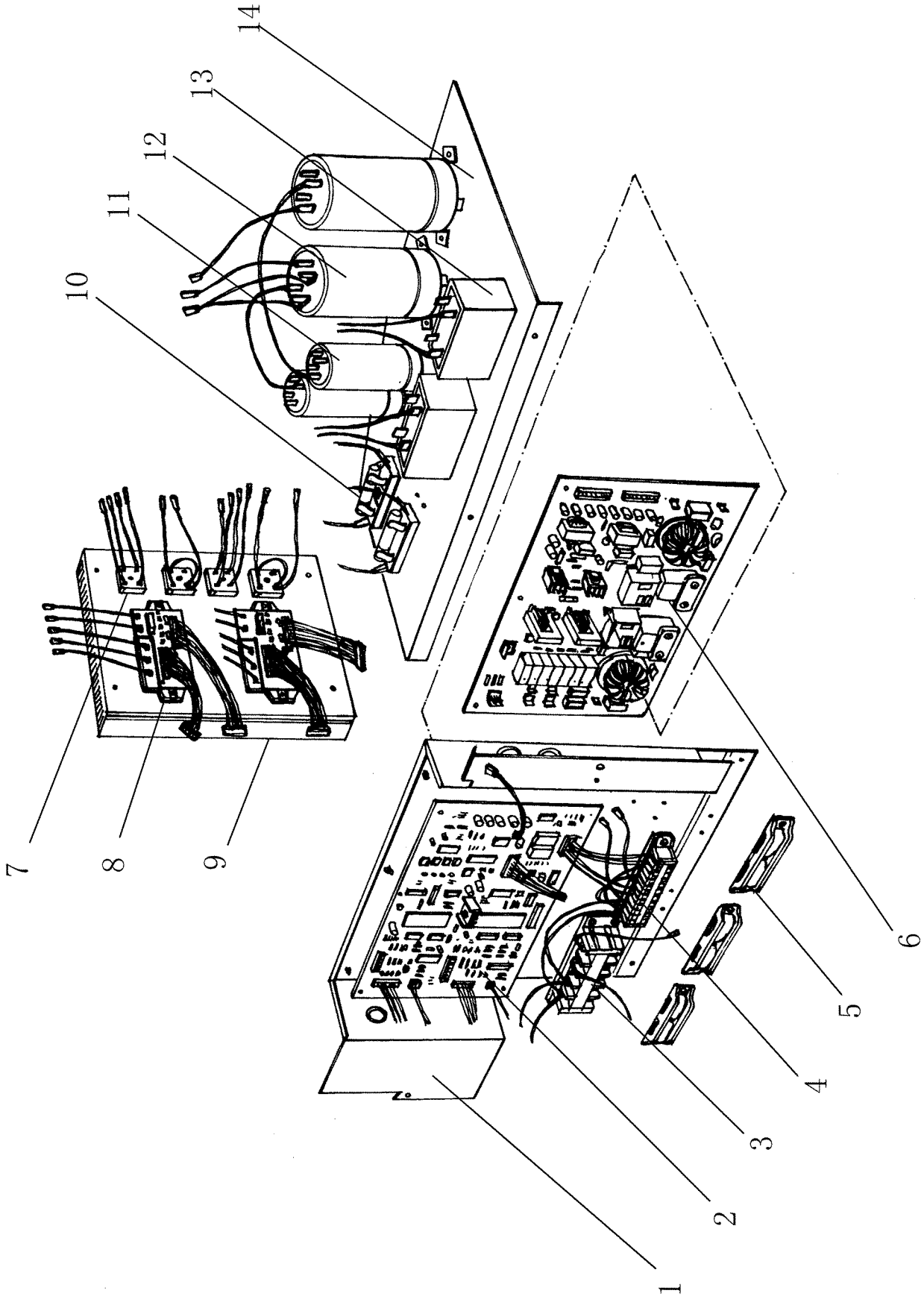
5,Above should be improved accord with the reply of the market half a year per time.

6.The spare parts price on net is FOB Qingdao term.

Parts list

No.	Spare parts number	Spare parts description in English	Qty.	Model	Failure rate	the proportion of the spare-part stock	Remark
1	001A0100122	Front guard assy	2	AU48NFIAIA	0.00%	0.000%	×
2	001A1301707	Plate for maintain	1	AU48NFIAIA	0.00%	0.000%	×
3	001A1301640	Front panel(left)	1	AU48NFIAIA	0.00%	0.000%	×
4	001A5402022	Axial Fan	2	AU48NFIAIA	0.02%	0.024%	*
5	001A3000201	Motor	2	AU48NFIAIA	0.02%	0.024%	*
6	001A0100498	Motor mounting plate	1	AU48NFIAIA	0.00%	0.000%	×
7	001A17421215	PE	1	AU48NFIAIA	0.00%	0.000%	×
8	0010150076	vertical plate	1	AU48NFIAIA	0.00%	0.000%	×
9	0010751389	Outdoor heat exchanger	1	AU48NFIAIA	0.01%	0.012%	
10	0010750761	segregator	1	AU48NFIAIA	0.00%	0.000%	×
11	001A1754686	sealed pad	1	AU48NFIAIA	0.00%	0.000%	×
12	0010450192	ambient temp. sensor	1	AU48NFIAIA	0.00%	0.000%	×
13	001A5736055	clip for sensor	1	AU48NFIAIA	0.00%	0.000%	×
14	001A0100827	cover	1	AU48NFIAIA	0.00%	0.000%	×
15	001A1101197	right side plate	1	AU48NFIAIA	0.00%	0.000%	×
16	001A0100767	guard for heat exchanger	1	AU48NFIAIA	0.00%	0.000%	×
17	001A2500127	eletromagnetic valve	1	AU48NFIAIA	0.00%	0.000%	×
18	0010450230	4-way valve	1	AU48NFIAIA	0.00%	0.000%	×
19	001A2500147	eletronic expansion valve	1	AU48NFIAIA	0.00%	0.000%	×
20	0010751390	pipe assy	1	AU48NFIAIA	0.00%	0.000%	×
21	001A1301465	fixing plate	1	AU48NFIAIA	0.00%	0.000%	×
22	0010450197	high pressure sensor	1	AU48NFIAIA	0.00%	0.000%	×
23	0010750476	3-way stop valve	1	AU48NFIAIA	0.00%	0.000%	×
24	001A2500116	3-way stop valve	1	AU48NFIAIA	0.00%	0.000%	×
25	0010450198	low pressure sensor	1	AU48NFIAIA	0.00%	0.000%	×
26	0010750474	high pressure storage	1	AU48NFIAIA	0.00%	0.000%	×
27	0010750475	oil segregator	1	AU48NFIAIA	0.00%	0.000%	×
28	0010751335	compressor	1	AU48NFIAIA	0.06%	0.072%	*
29	001A1301762	valve support plate	1	AU48NFIAIA	0.00%	0.000%	×
30	0010150080	bottom plate	1	AU48NFIAIA	0.00%	0.000%	×
31	001A1301117	little plate	1	AU48NFIAIA	0.00%	0.000%	×
32	001A1436160	handle	1	AU48NFIAIA	0.00%	0.000%	×

AU482FIAIA / AU48NFIAIA



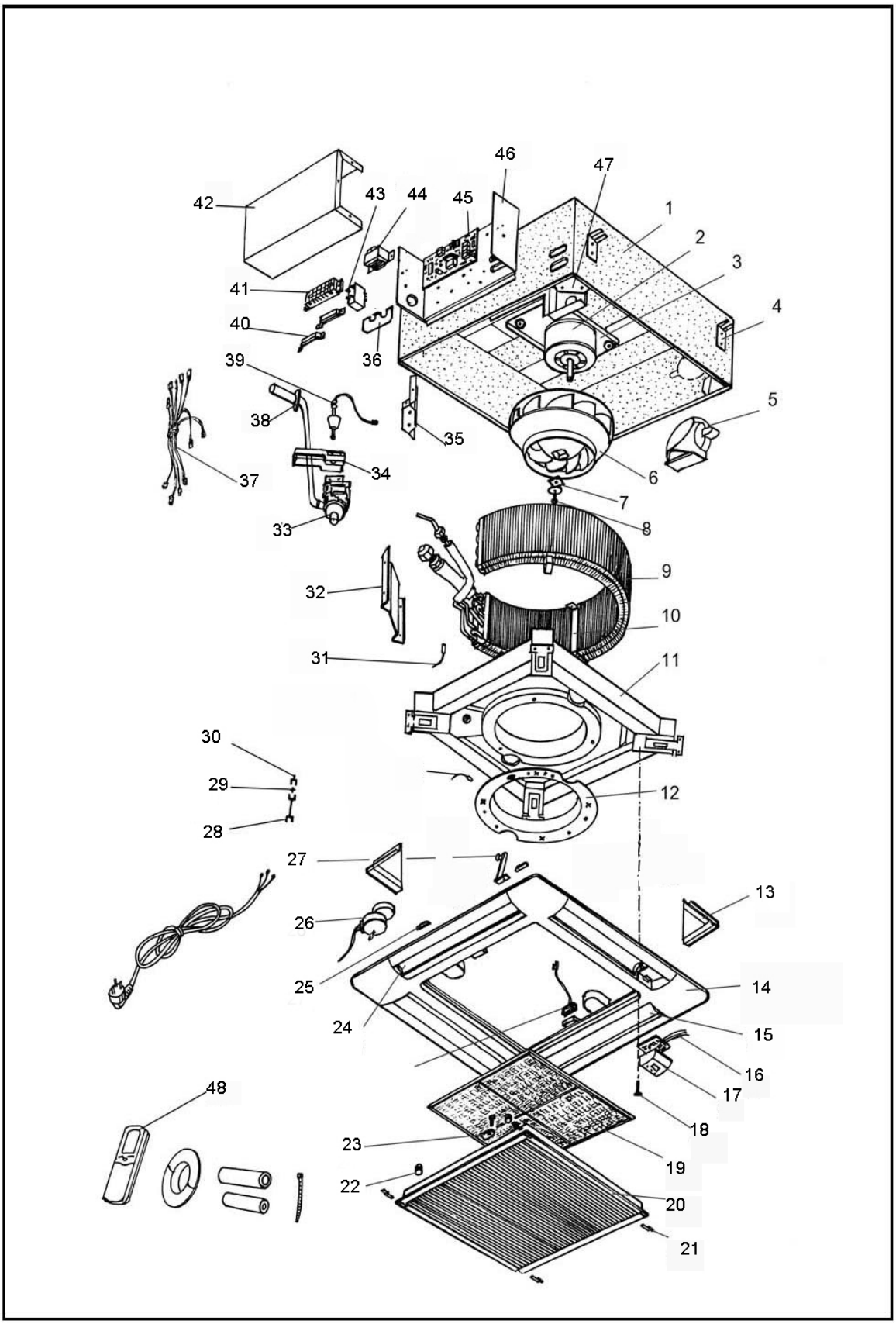
Parts list

No.	Spare parts number	Spare parts description in English	Qty.	Model	Failure rate	the proportion of the spare-part stock	Remark
1	0010150073	Electrical box	1	AU482FIAIA	0.00%	0.000%	×
2	0010450036	PCB 1	1	AU482FIAIA	0.02%	0.024%	*
3	0010450184	power supply Terminal board	1	AU482FIAIA	0.00%	0.000%	×
4	/	/	/	AU482FIAIA			
5	001A5745116	Terminal board	1	AU482FIAIA	0.00%	0.000%	×
6	0010450037	PCB 2	1	AU482FIAIA	0.02%	0.024%	*
7	0010450187	rectifier	2	AU482FIAIA	0.00%	0.000%	×
	0010450188	rectifier	1	AU482FIAIA	0.00%	0.000%	×
8	0010450201	power module	2	AU482FIAIA	0.00%	0.000%	×
9	0010450200	dispel heat patch	1	AU482FIAIA	0.00%	0.000%	×
10	/	/	/	AU482FIAIA			
11	0010450189	electrolyse capacitance 1	1	AU482FIAIA	0.04%	0.048%	*
12	0010450190	electrolyse capacitance 2	2	AU482FIAIA	0.04%	0.048%	*
13	001A3600018	Capacitor for fan motor	2	AU482FIAIA	0.04%	0.048%	*
14	0010150075	Electrical box(level)	1	AU482FIAIA	0.00%	0.000%	×

Parts list

No.	Spare parts number	Spare parts description in English	Qty.	Model	Failure rate	proportion of the spare-part stock	Remark
1	0010150073	Electrical box	1	AU48NFIAIA	0.00%	0.000%	×
2	0010450520	PCB 1	1	AU48NFIAIA	0.02%	0.024%	*
3	0010450184	Power supply Terminal board	1	AU48NFIAIA	0.00%	0.000%	×
5	001A5745116	Terminal board	1	AU48NFIAIA	0.00%	0.000%	×
6	0010450506	PCB 2	1	AU48NFIAIA	0.02%	0.024%	*
7	0010450676	Rectifier	1	AU48NFIAIA	0.00%	0.000%	×
8	0010450201	Power module	2	AU48NFIAIA	0.00%	0.000%	×
9	0010450200	Dispel heat patch	1	AU48NFIAIA	0.00%	0.000%	×
11	0010450642	Electrolyse capacitance	2	AU48NFIAIA	0.04%	0.048%	*
13	001A3600018	Capacitor for fan motor	2	AU48NFIAIA	0.04%	0.048%	*
14	0010150075	Electrical box(level)	1	AU48NFIAIA	0.00%	0.000%	×

MODEL : AB092FCAHA AB142FCAHA



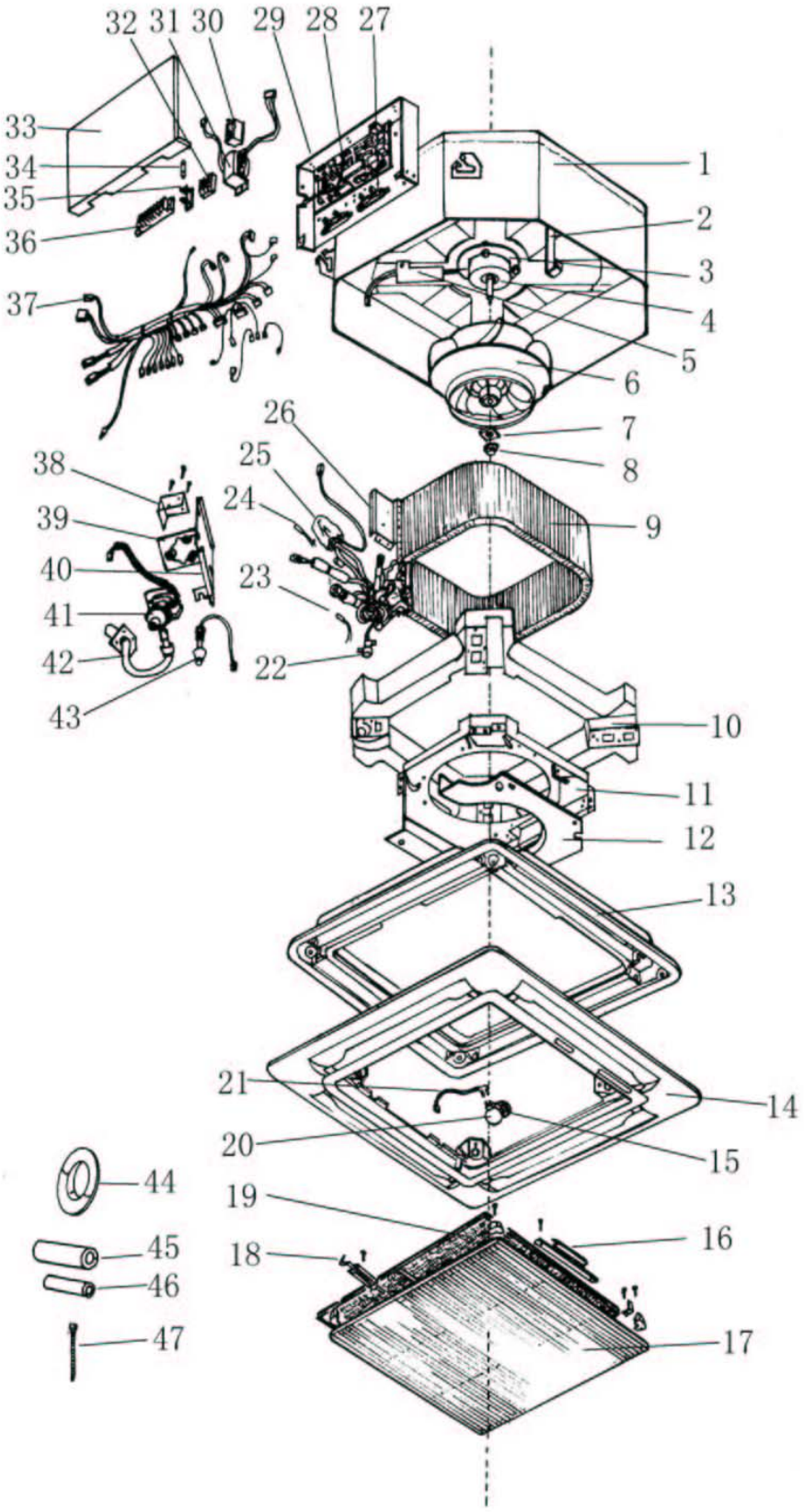
Parts list

No.	Spare parts number	Spare parts description in english	Qty.	Model	Failure rate	proportion of the spare-part stock	Remark
1	0010800868	Guard assembly	1	AB092FCAHA	0.00%	0.000%	×
2	0010400705	Indoor fan motor	1	AB092FCAHA	0.02%	0.024%	*
3	0010100531	Motor fix plate	1	AB092FCAHA	0.00%	0.000%	×
4	001A13011049	Swing	4	AB092FCAHA	0.00%	0.000%	×
5	0010201129	Ventilate duct	1	AB092FCAHA	0.00%	0.000%	×
6	0010250024	Centrifugal fan	1	AB092FCAHA	0.02%	0.024%	*
7	0010250101	Fan in-built part	1	AB092FCAHA	0.00%	0.000%	×
8	001A5002204A	screw	1	AB092FCAHA	0.00%	0.000%	×
9	0010750924	Evaporator assembly	1	AB092FCAHA	0.01%	0.012%	
10	0010100541	Evaporator fix nip	2	AB092FCAHA	0.00%	0.000%	×
11	0010201132	Drain pan	1	AB092FCAHA	0.00%	0.000%	×
12	0010201134	Wind ring	1	AB092FCAHA	0.00%	0.000%	×
13	0010250066	Motor box cover	4	AB092FCAHA	0.00%	0.000%	×
14	0010250049	Panel	1	AB092FCAHA	0.00%	0.000%	×
15	0010250050	Airflow oriented board 1	3	AB092FCAHA	0.00%	0.000%	×
16	0010450083	receive panel	1	AB092FCAHA	0.02%	0.024%	*
17	0010250054	Indicator light cover	1	AB092FCAHA	0.00%	0.000%	×
18	001A5002088	Bolt 4*16 BTHC	4	AB092FCAHA	0.00%	0.000%	×
19	0010250053	Air filter	1	AB092FCAHA	0.00%	0.000%	×
20	0010250052	Inlet grill	1	AB092FCAHA	0.00%	0.000%	×
21	0010250055	Fix bolt	4	AB092FCAHA	0.00%	0.000%	×
22	0010250058	Stationary rings	4	AB092FCAHA	0.00%	0.000%	×
23	0010250065	Axis sleeve	8	AB092FCAHA	0.00%	0.000%	×
24	0010250060	Switch fix clip	1	AB092FCAHA	0.00%	0.000%	×
25	0010250051	Airflow oriented board 2	1	AB092FCAHA	0.00%	0.000%	×
26	0010250057	Pull on line hole	4	AB092FCAHA	0.00%	0.000%	×
27	0010850097	Swing motor assembly	1	AB092FCAHA	0.02%	0.024%	*
28	0010250056	Holding pole	2	AB092FCAHA	0.00%	0.000%	×
29	0010250062	Connecting rod	3	AB092FCAHA	0.00%	0.000%	×
30	0010250063	Coupler	6	AB092FCAHA	0.00%	0.000%	×
31	0010250064	Connection	8	AB092FCAHA	0.00%	0.000%	×
32	0010100536	Partition plate	1	AB092FCAHA	0.00%	0.000%	×
33	001A3000197	Water pump motor	1	AB092FCAHA	0.02%	0.024%	*
34	0010150041	Water pump motor bracke	1	AB092FCAHA	0.00%	0.000%	×
35	0010100532	Fix plate	1	AB092FCAHA	0.00%	0.000%	×
36	0010100528	Lock plate	1	AB092FCAHA	0.00%	0.000%	×
37	0010450282	Indoor wiring assembly	1	AB092FCAHA	0.00%	0.000%	×
38	001A14341141	Drainage pipe	1	AB092FCAHA	0.00%	0.000%	×
39	001A3400160	Level switch	1	AB092FCAHA	0.00%	0.000%	×
40	001A5745116	Power line clip	2	AB092FCAHA	0.00%	0.000%	×
41	001A4000177	Terminal block	1	AB092FCAHA	0.00%	0.000%	×
42	0010100538	Eletrical box cover	1	AB092FCAHA	0.00%	0.000%	×
43	001A3600018	Fan motor capacitor 4 uf	1	AB092FCAHA	0.04%	0.048%	*
44	001A3800141	Resumable transformer	1	AB092FCAHA	0.00%	0.000%	×
45	0010400879	Indoor PCB	1	AB092FCAHA	0.02%	0.024%	*
46	0010100537	Eletrical box	1	AB092FCAHA	0.00%	0.000%	×
47	0010800870	Wiring partition	1	AB092FCAHA	0.00%	0.000%	×
48	0010450069	Elevating remote controlle	1	AB092FCAHA	0.01%	0.012%	

Parts list

No.	Spare parts number	Spare parts description in english	Qty.	Model	Failure rate	the proportion of the spare-part	Remark
1	0010800868	Guard assembly	1	AB142FCAHA	0.00%	0.000%	×
2	0010400705	Indoor fan motor	1	AB142FCAHA	0.02%	0.024%	*
3	0010100531	Motor fix plate	1	AB142FCAHA	0.00%	0.000%	×
4	001A13011049	Swing	4	AB142FCAHA	0.00%	0.000%	×
5	0010201129	Ventilate duct	1	AB142FCAHA	0.00%	0.000%	×
6	0010250024	Centrifugal fan	1	AB142FCAHA	0.02%	0.024%	*
7	0010250101	Fan in-built part	1	AB142FCAHA	0.00%	0.000%	×
8	001A5002204A	screw	1	AB142FCAHA	0.00%	0.000%	×
9	0010750924	Evaporator assembly	1	AB142FCAHA	0.01%	0.012%	
10	0010100541	Evaporator fix nip	2	AB142FCAHA	0.00%	0.000%	×
11	0010201132	Drain pan	1	AB142FCAHA	0.00%	0.000%	×
12	0010201134	Wind ring	1	AB142FCAHA	0.00%	0.000%	×
13	0010250066	Motor box cover	4	AB142FCAHA	0.00%	0.000%	×
14	0010250049	Panel	1	AB142FCAHA	0.00%	0.000%	×
15	0010250050	Airflow oriented board 1	3	AB142FCAHA	0.00%	0.000%	×
16	0010450083	receive panel	1	AB142FCAHA	0.02%	0.024%	*
17	0010250054	Indicator light cover	1	AB142FCAHA	0.00%	0.000%	×
18	001A5002088	Bolt 4*16 BTHC	4	AB142FCAHA	0.00%	0.000%	×
19	0010250053	Air filter	1	AB142FCAHA	0.00%	0.000%	×
20	0010250052	Inlet grill	1	AB142FCAHA	0.00%	0.000%	×
21	0010250055	Fix bolt	4	AB142FCAHA	0.00%	0.000%	×
22	0010250058	Stationary rings	4	AB142FCAHA	0.00%	0.000%	×
23	0010250065	Axis sleeve	8	AB142FCAHA	0.00%	0.000%	×
24	0010250060	Switch fix clip	1	AB142FCAHA	0.00%	0.000%	×
25	0010250051	Airflow oriented board 2	1	AB142FCAHA	0.00%	0.000%	×
26	0010250057	Pull on line hole	4	AB142FCAHA	0.00%	0.000%	×
27	0010850097	Swing motor assembly	1	AB142FCAHA	0.02%	0.024%	*
28	0010250056	Holding pole	2	AB142FCAHA	0.00%	0.000%	×
29	0010250062	Connecting rod	3	AB142FCAHA	0.00%	0.000%	×
30	0010250063	Coupler	6	AB142FCAHA	0.00%	0.000%	×
31	0010250064	Connection	8	AB142FCAHA	0.00%	0.000%	×
32	0010100536	Partition plate	1	AB142FCAHA	0.00%	0.000%	×
33	001A3000197	Water pump motor	1	AB142FCAHA	0.02%	0.024%	*
34	0010150041	Water pump motor bracke	1	AB142FCAHA	0.00%	0.000%	×
35	0010100532	Fix plate	1	AB142FCAHA	0.00%	0.000%	×
36	0010100528	Lock plate	1	AB142FCAHA	0.00%	0.000%	×
37	0010450310	Indoor wiring assembly	1	AB142FCAHA	0.00%	0.000%	×
38	001A14341141	Drainage pipe	1	AB142FCAHA	0.00%	0.000%	×
39	001A3400160	Level switch	1	AB142FCAHA	0.00%	0.000%	×
40	001A5745116	Power line clip	2	AB142FCAHA	0.00%	0.000%	×
41	001A4000177	Terminal block	1	AB142FCAHA	0.00%	0.000%	×
42	0010100538	Eletrical box cover	1	AB142FCAHA	0.00%	0.000%	×
43	001A3600018	Fan motor capacitor 4 uf	1	AB142FCAHA	0.04%	0.048%	*
44	001A3800141	Resumable transformer	1	AB142FCAHA	0.00%	0.000%	×
45	0010400879	Indoor PCB	1	AB142FCAHA	0.02%	0.024%	*
46	0010100537	Eletrical box	1	AB142FCAHA	0.00%	0.000%	×
47	0010800870	Wiring partition	1	AB142FCAHA	0.00%	0.000%	×
48	0010450069	Remote controller	1	AB142FCAHA	0.01%	0.012%	

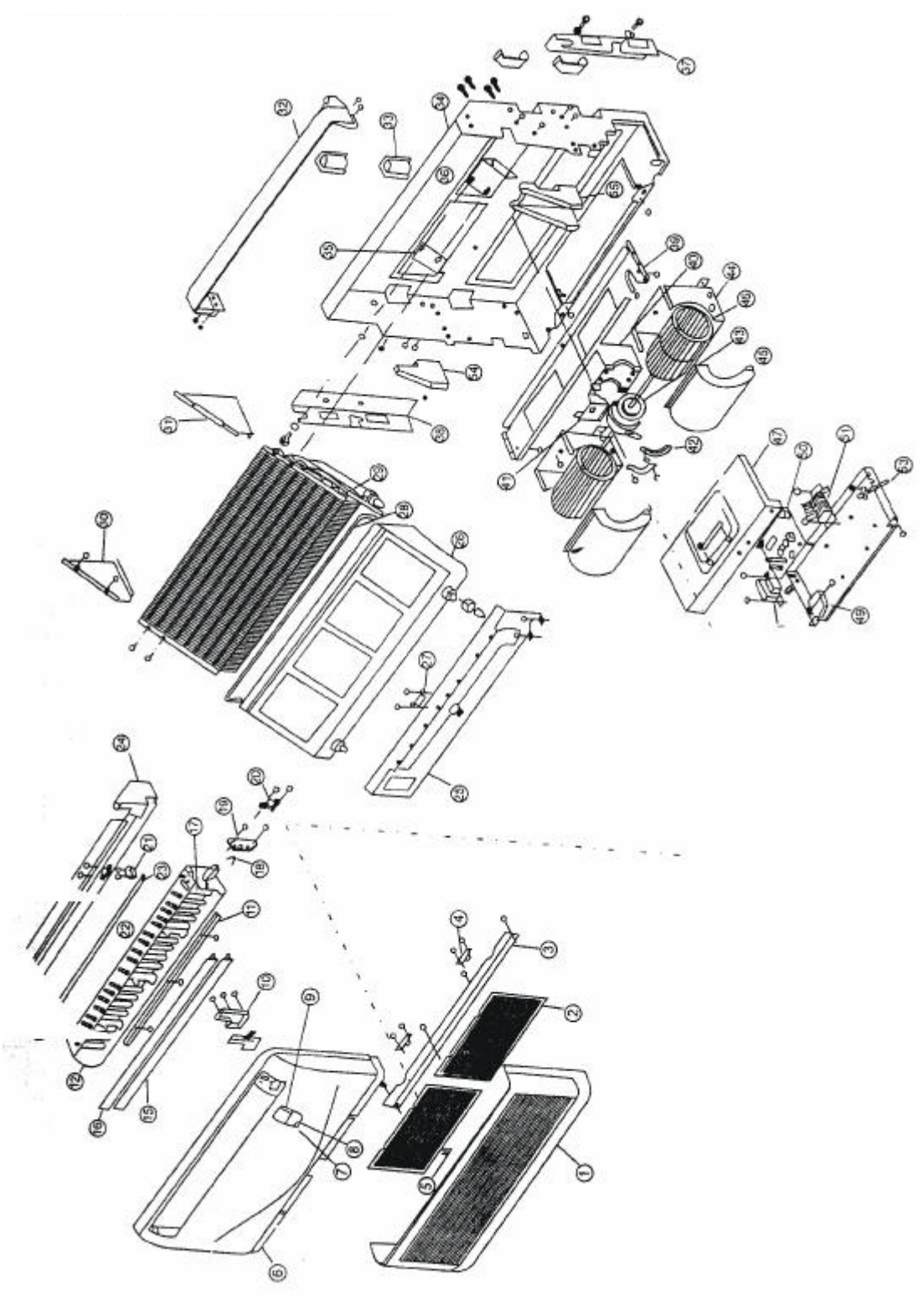
MODEL : AB182FCAHA



Parts list

No.	Spare parts number	Spare parts description in english	Qty.	Model	Failure rate	the proportion of the spare-	Remark
1	0010800033	base pan assy	1	AB182FCAHA	0.00%	0.000%	X
2	001A1301358	evaporator holder	2	AB182FCAHA	0.00%	0.000%	X
3	001A1301352	motor press panel	1	AB182FCAHA	0.00%	0.000%	X
4	001A3000093	motor (indoor)	1	AB182FCAHA	0.02%	0.024%	*
5	001A1301353	base pan press wire panel	1	AB182FCAHA	0.00%	0.000%	X
6	001A2300040	centrifugal fan	1	AB182FCAHA	0.02%	0.024%	*
7	001A5401035	flat pad	3	AB182FCAHA	0.00%	0.000%	X
8	001A5102050	flange nut	1	AB182FCAHA	0.00%	0.000%	X
9	0010701153	evaporator assy	1	AB182FCAHA	0.00%	0.000%	X
10	001A0100306	drain pan assy	1	AB182FCAHA	0.01%	0.012%	
11	001A0100304	wind ring assy	1	AB182FCAHA	0.00%	0.000%	X
12	001A1101094	cover panel	1	AB182FCAHA	0.00%	0.000%	X
13	001A0100303	panel pad assy	1	AB182FCAHA	0.02%	0.024%	*
14	001A1231163	panel	1	AB182FCAHA	0.00%	0.000%	X
15	001A1436557	small cam	1	AB182FCAHA	0.00%	0.000%	X
16	001A1301344	inlet grill bolt	1	AB182FCAHA	0.00%	0.000%	X
17	001A1231165	inlet grill	1	AB182FCAHA	0.00%	0.000%	X
18	001A0100302	inlet grill bolt assy	2	AB182FCAHA	0.00%	0.000%	X
19	001A2431057	filter net	1	AB182FCAHA	0.00%	0.000%	X
20	001A3000098	sychro-motor	1	AB182FCAHA	0.02%	0.024%	*
21	0010400547	sychro-motor wire	1	AB182FCAHA	0.00%	0.000%	X
22	001A3800145	pressure sensoı	1	AB182FCAHA	0.02%	0.024%	*
23	001A3800153	gas temp. sensor	1	AB182FCAHA	0.02%	0.024%	*
24	001A3800152	liquid pipe temp. sensor	1	AB182FCAHA	0.02%	0.024%	*
25	001A2500146	PMV	1	AB182FCAHA	0.01%	0.012%	
26	001A1301359	evaporator bracket	1	AB182FCAHA	0.00%	0.000%	X
27	001A5745116	press wire clip	2	AB182FCAHA	0.00%	0.000%	X
28	0010400879	control base panel	1	AB182FCAHA	0.02%	0.024%	*
29	0010100417	electrical box	1	AB182FCAHA	0.00%	0.000%	X
30	001A3600009B	fan motor capacitor	1	AB182FCAHA	0.02%	0.024%	*
31	001A13011199	electrical box cover	1	AB182FCAHA	0.00%	0.000%	X
32	001A4000177	terminal block 6	1	AB182FCAHA	0.01%	0.012%	
33	0010400880	wireness bind assy	1	AB182FCAHA	0.01%	0.012%	
34	001A1439566A	waterproof clarify panel	1	AB182FCAHA	0.00%	0.000%	X
35	001A1301375	water motor support panel	1	AB182FCAHA	0.00%	0.000%	X
36	001A1302753	water support panel assy	1	AB182FCAHA	0.00%	0.000%	X
37	0010450169	water pump motor	1	AB182FCAHA	0.01%	0.012%	
38	001A0100311	drain pipe assy	1	AB182FCAHA	0.00%	0.000%	X
39	001A3400076	float switch	1	AB182FCAHA	0.01%	0.012%	
40	001A1752228A	guard ring	2	AB182FCAHA	0.01%	0.012%	
41	001A1434575A	partition pipe 1	1	AB182FCAHA	0.00%	0.000%	X
42	001A1434576A	partition pipe 2	1	AB182FCAHA	0.00%	0.000%	X
43	001A6645007	wire clip	12	AB182FCAHA	0.00%	0.000%	X

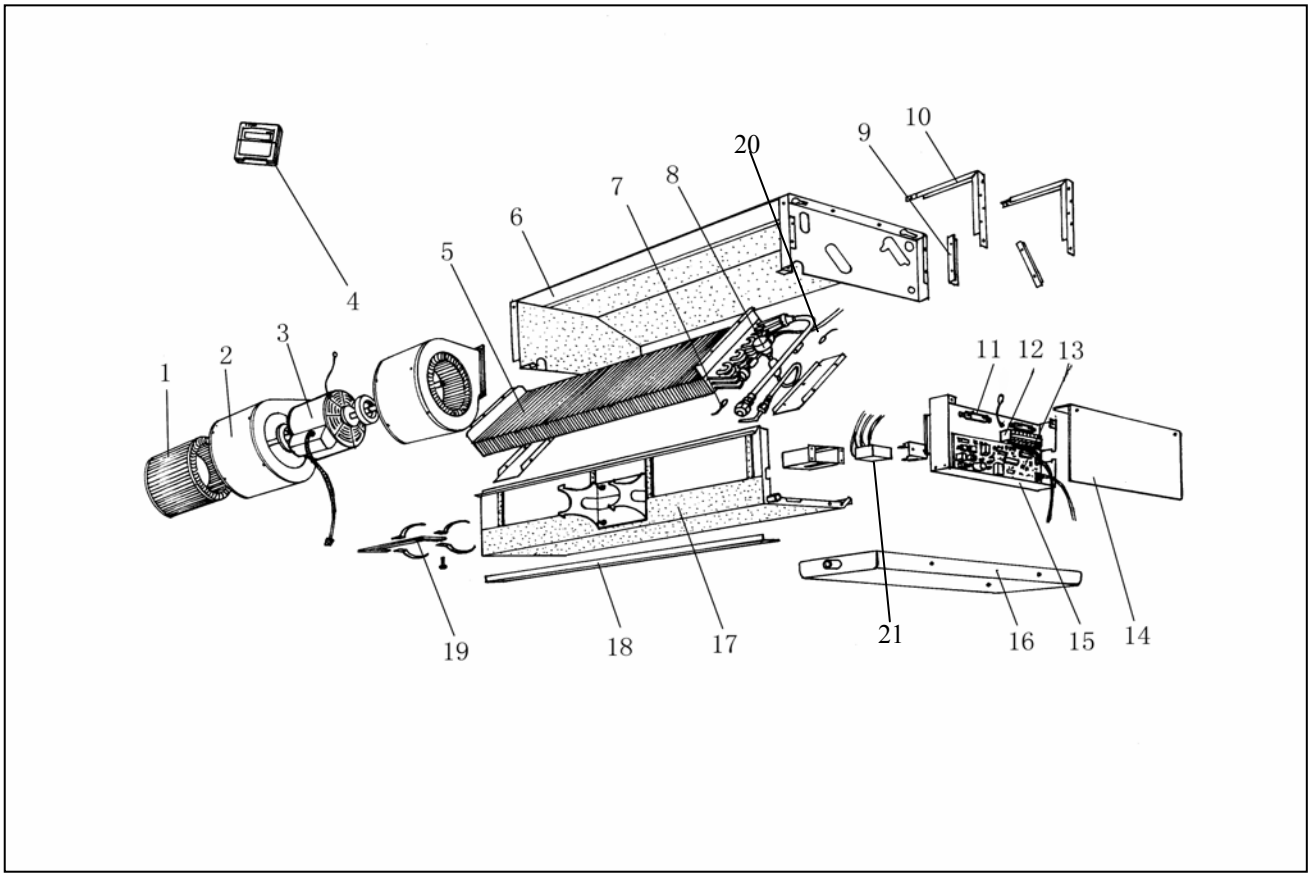
Model: AC182FCAHA



Parts list

No.	Spare parts number	Spare parts description in English	Qty.	Model	Failure rate	the proportion of the spare-part stock	Remark
1	001A0100330	air inlet grill	1	AC182FCAHA	0.0000%	0.0000%	×
2	001A2400087	air filter	2	AC182FCAHA	0.0000%	0.0000%	×
3	001A1301395	teinforced rod	1	AC182FCAHA	0.0000%	0.0000%	×
4	001A1431559	pinch plate	1	AC182FCAHA	0.0000%	0.0000%	×
5	001A17001180	fixed board	1	AC182FCAHA	0.0000%	0.0000%	×
6	001A1231181	front panel	1	AC182FCAHA	0.0000%	0.0000%	×
7	001A1431586	display panel	1	AC182FCAHA	0.0000%	0.0000%	×
8	001A1444589	red wire window	1	AC182FCAHA	0.0000%	0.0000%	×
9	001A1431587	indicating lamp-shaded	1	AC182FCAHA	0.0000%	0.0000%	×
10	001A1431588	cover for indicator panel	1	AC182FCAHA	0.0000%	0.0000%	×
11	001A1742772A	rod board	3	AC182FCAHA	0.0000%	0.0000%	×
12	001A0100331	frame for air outlet grill	3	AC182FCAHA	0.0000%	0.0000%	×
13	001A1431593	long pole 1	1	AC182FCAHA	0.0000%	0.0000%	×
14	001A1431594	long pole 2	1	AC182FCAHA	0.0000%	0.0000%	×
15	001A1431593	blade2	1	AC182FCAHA	0.0000%	0.0000%	×
16	001A1431594	blade1	1	AC182FCAHA	0.0000%	0.0000%	×
17	001A1431599	blade(small)	1	AC182FCAHA	0.0000%	0.0000%	×
18	001A1431598	crank link	1	AC182FCAHA	0.0200%	0.0240%	*
19	001A1431595	frame for step motor	1	AC182FCAHA	0.0000%	0.0000%	×
20	001A3000107	stepping motor	1	AC182FCAHA	0.0200%	0.0240%	*
21	001A1431605	irregular board	1	AC182FCAHA	0.0000%	0.0000%	×
22	001A1443602	long pole assembly 1	1	AC182FCAHA	0.0000%	0.0000%	×
23	001A1443603	long pole assembly 2	1	AC182FCAHA	0.0000%	0.0000%	×
24	001A1231192	sub-drain pan	1	AC182FCAHA	0.0000%	0.0000%	×
25	001A1301388	partition plate (up)	1	AC182FCAHA	0.0000%	0.0000%	×
26	001A1233191	drain pan	1	AC182FCAHA	0.0000%	0.0000%	×
27	001A1436607	door lock	2	AC182FCAHA	0.0000%	0.0000%	×
28	001A1301396	fixed press strip	1	AC182FCAHA	0.0000%	0.0000%	×
29	0010701137	evaporator assembly	1	AC182FCAHA	0.0100%	0.0120%	
30	001A1231183	support plate	2	AC182FCAHA	0.0000%	0.0000%	×
31	001A1231184	support plate	2	AC182FCAHA	0.0000%	0.0000%	×
32	001A1231182	top plate	1	AC182FCAHA	0.0000%	0.0000%	×
33	001A1436606	handle	1	AC182FCAHA	0.0000%	0.0000%	×
34	001A1101098	rear frame assembly	1	AC182FCAHA	0.0000%	0.0000%	×
35	001A1301400	evaporator fixed-board	1	AC182FCAHA	0.0000%	0.0000%	×
36	001A13011226	evaporator fixed-board	1	AC182FCAHA	0.0000%	0.0000%	×
37	001A1101103	mounting plate	1	AC182FCAHA	0.0000%	0.0000%	×
38	001A1101104	mounting plate	1	AC182FCAHA	0.0200%	0.0240%	*
39	001A0100610	mounting plate	1	AC182FCAHA	0.0000%	0.0000%	×
40	0010800161	frame for motor	1	AC182FCAHA	0.0000%	0.0000%	×
41	001A1301381	motor assembly	1	AC182FCAHA	0.0200%	0.0240%	*
42	001A1301382	motor pressure pad	2	AC182FCAHA	0.0000%	0.0000%	×
43	001A3000109	motor	1	AC182FCAHA	0.0200%	0.0240%	*
44	001A1431608	worm shell	2	AC182FCAHA	0.0000%	0.0000%	×
45	001A1431609	worm shell	2	AC182FCAHA	0.0000%	0.0000%	×
46	001A2300042	centrifugal fan	2	AC182FCAHA	0.0500%	0.0600%	*
47	001A0100609	electrical box cover	1	AC182FCAHA	0.0400%	0.0480%	*
48	001A3800141	transformer	1	AC182FCAHA	0.0200%	0.0240%	*
49	001A3600009B	motor capacitor	1	AC182FCAHA	0.0100%	0.0120%	
50	001A0400877	control board	1	AC182FCAHA	0.0100%	0.0120%	
51	001A4000177	terminal block	1	AC182FCAHA	0.0000%	0.0000%	×
52	001A1301378	electrical box	1	AC182FCAHA	0.0100%	0.0120%	
53	001A14311292	power supply	1	AC182FCAHA	0.0000%	0.0000%	×
54	001A1734865	evaporator pad	1	AC182FCAHA	0.0000%	0.0000%	×
55	001A1734866	evaporator pad	1	AC182FCAHA	0.0000%	0.0000%	×

Model: AE072FCAKA -AE242FCAKA,AE092-182FCAJA



Parts list

No.	Spare parts number	Spare parts description in English	Qty.	Model	Failure rate	the proportion of the spare-part stock	Remark
1	*0010850604.1	fan	2	AE072FCAKA	0.0200%	0.0240%	*
2	*0010850604.2	scroll case	2	AE072FCAKA	0.0000%	0.0000%	X
3	*0010850604.3	fan motor	1	AE072FCAKA	0.0200%	0.0240%	*
4	0010400137	wire remote controller	1	AE072FCAKA	0.0100%	0.0120%	
5	*0010850604.4	evaporator	1	AE072FCAKA	0.0000%	0.0000%	X
6	*0010850604.5	shell	1	AE072FCAKA	0.0000%	0.0000%	X
7	0010450699	coi pipe temperature sensor (gas and liquid)	1	AE072FCAKA	0.0100%	0.0120%	
20	/	/	/	AE072FCAKA	/	/	/
8	/	/	/	AE072FCAKA	/	/	/
21	/	/	/	AE072FCAKA	/	/	/
9	*0010850604.6	subsiduary drain pan support bracket	1	AE072FCAKA	0.0000%	0.0000%	X
10	*0010850604.7	electricial box support bracket	1	AE072FCAKA	0.0000%	0.0000%	X
11	001A5745116	clip plate	2	AE072FCAKA	0.0000%	0.0000%	X
12	0010450655	terminal block	1	AE072FCAKA	0.0100%	0.0120%	
13	0010450743	indoor PCB	1	AE072FCAKA	0.0200%	0.0240%	*
14	001A13011199	electricial box cover	1	AE072FCAKA	0.0000%	0.0000%	X
15	001A13011198	electricial box	1	AE072FCAKA	0.0100%	0.0120%	
16	*0010850604.8	subsiduary drain pan	1	AE072FCAKA	0.0000%	0.0000%	X
17	*0010850604.9	drain pan	1	AE072FCAKA	0.0000%	0.0000%	X
18	*0010850604.10	outlet airflow flange	1	AE072FCAKA	0.0000%	0.0000%	X
19	*0010850604.11	motor mix ring	1	AE072FCAKA	0.0000%	0.0000%	X

Parts list

No.	Spare parts number	Spare parts description in English	Qty.	Model	Failure rate	the proportion of the spare-part stock	Remark
1	*0010850605.1	fan	2	AE242FCAKA	0.0200%	0.0240%	*
2	*0010850605.2	scroll case	2	AE242FCAKA	0.0000%	0.0000%	X
3	*0010850605.3	fan motor	1	AE242FCAKA	0.0200%	0.0240%	*
4	0010400137	wire remote controller	1	AE242FCAKA	0.0100%	0.0120%	
5	*0010850605.4	evaporator	1	AE242FCAKA	0.0000%	0.0000%	X
6	*0010850605.5	shell	1	AE242FCAKA	0.0000%	0.0000%	X
7	0010450699	coi pipe temperature sensor (gas and liquid)	1	AE242FCAKA	0.0100%	0.0120%	
20	/	/	/	AE242FCAKA	/	/	/
8	/	/	/	AE242FCAKA	/	/	/
21	/	/	/	AE242FCAKA	/	/	/
9	*0010850605.6	subsiduary drain pan support bracket	1	AE242FCAKA	0.0000%	0.0000%	X
10	*0010850605.7	electricial box support bracket	1	AE242FCAKA	0.0000%	0.0000%	X
11	001A5745116	clip plate	2	AE242FCAKA	0.0000%	0.0000%	X
12	0010450655	terminal block	1	AE242FCAKA	0.0100%	0.0120%	
13	0010450749	indoor PCB	1	AE242FCAKA	0.0200%	0.0240%	*
14	001A13011199	electricial box cover	1	AE242FCAKA	0.0000%	0.0000%	X
15	001A13011198	electricial box	1	AE242FCAKA	0.0100%	0.0120%	
16	*0010850605.8	subsiduary drain pan	1	AE242FCAKA	0.0000%	0.0000%	X
17	*0010850605.9	drain pan	1	AE242FCAKA	0.0000%	0.0000%	X
18	*0010850605.10	outlet airflow flange	1	AE242FCAKA	0.0000%	0.0000%	X
19	*0010850605.11	motor mix ring	1	AE242FCAKA	0.0000%	0.0000%	X

Parts list

No.	Spare parts number	Spare parts description in English	Qty.	Model	Failure rate	the proportion of the spare-part stock	Remark
1	0010250281	fan	2	AE092FCAKA	0.0200%	0.0240%	*
2	0010850502	scroll case	2	AE092FCAKA	0.0000%	0.0000%	X
3	0010450657	fan motor	1	AE092FCAKA	0.0200%	0.0240%	*
4	0010400137	wire remote controller	1	AE092FCAKA	0.0100%	0.0120%	
5	0010751752	evaporator	1	AE092FCAKA	0.0000%	0.0000%	X
6	0010150328	shell	1	AE092FCAKA	0.0000%	0.0000%	X
7	0010450699	coil pipe temperature sensor (gas and liquid)	1	AE092FCAKA	0.0100%	0.0120%	
20	/	/	/	AE092FCAKA	/	/	/
8	/	/	/	AE092FCAKA	/	/	/
21	/	/	/	AE092FCAKA	/	/	/
9	0010150330	support bracket	1	AE092FCAKA	0.0000%	0.0000%	X
10	0010150220	fxiting plate	1	AE092FCAKA	0.0000%	0.0000%	X
11	001A5745116	clip plate	2	AE092FCAKA	0.0000%	0.0000%	X
12	0010450655	terminal block	1	AE092FCAKA	0.0100%	0.0120%	
13	0010450744	indoor PCB	1	AE092FCAKA	0.0200%	0.0240%	*
14	0010250135	electricial box cover	1	AE092FCAKA	0.0000%	0.0000%	X
15	0010250134	electricial box	1	AE092FCAKA	0.0100%	0.0120%	
16	0010150326	subsiduary drain pan	1	AE092FCAKA	0.0000%	0.0000%	X
17	0010150324	drain pan	1	AE092FCAKA	0.0000%	0.0000%	X
18	/	/	/	AE092FCAKA	/	/	/
19	/	/	/	AE092FCAKA	/	/	/

Parts list

No.	Spare parts number	Spare parts description in English	Qty.	Model	Failure rate	the proportion of the spare-part stock	Remark
1	0010250242	fan	2	AE122FCAKA	0.0200%	0.0240%	*
2	0010850395	scroll case	2	AE122FCAKA	0.0000%	0.0000%	X
3	0010450803	fan motor	1	AE122FCAKA	0.0200%	0.0240%	*
4	0010400137	wire remote controller	1	AE122FCAKA	0.0100%	0.0120%	
5	0010751722	evaporator	1	AE122FCAKA	0.0000%	0.0000%	X
6	0010850387	shell	1	AE122FCAKA	0.0000%	0.0000%	X
7	0010450699	coil pipe temperature sensor (gas and liquid)	1	AE122FCAKA	0.0100%	0.0120%	
20	/	/	/	AE122FCAKA	/	/	/
8	/	/	/	AE122FCAKA	/	/	/
21	/	/	/	AE122FCAKA	/	/	/
9	0010150219	support bracket	1	AE122FCAKA	0.0000%	0.0000%	X
10	0010150220	fxiting plate	1	AE122FCAKA	0.0000%	0.0000%	X
11	001A5745116	clip plate	2	AE122FCAKA	0.0000%	0.0000%	X
12	0010450655	terminal block	1	AE122FCAKA	0.0100%	0.0120%	
13	0010450745	indoor PCB	1	AE122FCAKA	0.0200%	0.0240%	*
14	0010250135	electricial box cover	1	AE122FCAKA	0.0000%	0.0000%	X
15	0010250134	electricial box	1	AE122FCAKA	0.0100%	0.0120%	
16	0010150236	subsiduary drain pan	1	AE122FCAKA	0.0000%	0.0000%	X
17	0010150237	drain pan	1	AE122FCAKA	0.0000%	0.0000%	X
18	/	/	/	AE122FCAKA	/	/	/
19	/	/	/	AE122FCAKA	/	/	/

Parts list

No.	Spare parts number	Spare parts description in English	Qty.	Model	Failure rate	the proportion of the spare-part	Remark
1	0010250242	fan	2	AE142FCAKA	0.0200%	0.0240%	*
2	0010850395	scroll case	2	AE142FCAKA	0.0000%	0.0000%	X
3	0010450594	fan motor	1	AE142FCAKA	0.0200%	0.0240%	*
4	0010400137	wire remote controller	1	AE142FCAKA	0.0100%	0.0120%	
5	0010751728	evaporator	1	AE142FCAKA	0.0000%	0.0000%	X
6	0010850387	shell	1	AE142FCAKA	0.0000%	0.0000%	X
7	0010450699	coil pipe temperature sensor (gas and liquid)	1	AE142FCAKA	0.0100%	0.0120%	
20	/	/	/	AE142FCAKA	/	/	/
8	/	/	/	AE142FCAKA	/	/	/
21	/	/	/	AE142FCAKA	/	/	/
9	0010150370	support bracket	1	AE142FCAKA	0.0000%	0.0000%	X
10	0010150371	fxiting plate	1	AE142FCAKA	0.0000%	0.0000%	X
11	001A5745116	clip plate	2	AE142FCAKA	0.0000%	0.0000%	X
12	0010450655	terminal block	1	AE142FCAKA	0.0100%	0.0120%	
13	0010450746	indoor PCB	1	AE142FCAKA	0.0200%	0.0240%	*
14	0010250135	electricial box cover	1	AE142FCAKA	0.0000%	0.0000%	X
15	0010250134	electricial box	1	AE142FCAKA	0.0100%	0.0120%	
16	0010150236	subsiduary drain pan	1	AE142FCAKA	0.0000%	0.0000%	X
17	0010150237	drain pan	1	AE142FCAKA	0.0000%	0.0000%	X
18	/	/	/	AE142FCAKA	/	/	/
19	/	/	/	AE142FCAKA	/	/	/

Parts list

No.	Spare parts number	Spare parts description in English	Qty.	Model	Failure rate	the proportion of the spare-part stock	Remark
1	0010250242	fan	2	AE182FCAKA	0.0200%	0.0240%	*
2	0010850395	scroll case	2	AE182FCAKA	0.0000%	0.0000%	X
3	0010450779	fan motor	1	AE182FCAKA	0.0200%	0.0240%	*
4	0010400137	wire remote controller	1	AE182FCAKA	0.0100%	0.0120%	
5	0010751738	evaporator	1	AE182FCAKA	0.0000%	0.0000%	X
6	0010850387	shell	1	AE182FCAKA	0.0000%	0.0000%	X
7	0010450699	coil pipe temperature sensor (gas and liquid)	1	AE182FCAKA	0.0100%	0.0120%	
20	/	/	/	AE182FCAKA	/	/	/
8	/	/	/	AE182FCAKA	/	/	/
21	/	/	/	AE182FCAKA	/	/	/
9	0010150219	support bracket	1	AE182FCAKA	0.0000%	0.0000%	X
10	0010150220	fxiting plate	1	AE182FCAKA	0.0000%	0.0000%	X
11	001A5745116	clip plate	2	AE182FCAKA	0.0000%	0.0000%	X
12	0010450655	terminal block	1	AE182FCAKA	0.0100%	0.0120%	
13	0010450747	indoor PCB	1	AE182FCAKA	0.0200%	0.0240%	*
14	0010250135	electricial box cover	1	AE182FCAKA	0.0000%	0.0000%	X
15	0010250134	electricial box	1	AE182FCAKA	0.0100%	0.0120%	
16	0010150221	subsiduary drain pan	1	AE182FCAKA	0.0000%	0.0000%	X
17	0010150213	drain pan	1	AE182FCAKA	0.0000%	0.0000%	X
18	/	/	/	AE182FCAKA	/	/	/
19	/	/	/	AE182FCAKA	/	/	/

Parts list

No.	Spare parts number	Spare parts description in English	Qty.	Model	Failure rate	the proportion of the spare-part stock	Remark
1	0010250242	fan	2	AE212FCAKA	0.0200%	0.0240%	*
2	0010850395	scroll case	2	AE212FCAKA	0.0000%	0.0000%	X
3	0010450779	fan motor	1	AE212FCAKA	0.0200%	0.0240%	*
4	0010400137	wire remote controller	1	AE212FCAKA	0.0100%	0.0120%	
5	0010751748	evaporator	1	AE212FCAKA	0.0000%	0.0000%	X
6	0010850387	shell	1	AE212FCAKA	0.0000%	0.0000%	X
7	0010450699	coil pipe temperature sensor (gas and liquid)	1	AE212FCAKA	0.0100%	0.0120%	
20	/	/	/	AE212FCAKA	/	/	/
8	/	/	/	AE212FCAKA	/	/	/
21	/	/	/	AE212FCAKA	/	/	/
9	0010150370	support bracket	1	AE212FCAKA	0.0000%	0.0000%	X
10	0010150371	fxiting plate	1	AE212FCAKA	0.0000%	0.0000%	X
11	001A5745116	clip plate	2	AE212FCAKA	0.0000%	0.0000%	X
12	0010450655	terminal block	1	AE212FCAKA	0.0100%	0.0120%	
13	0010450748	indoor PCB	1	AE212FCAKA	0.0200%	0.0240%	*
14	0010250135	electricial box cover	1	AE212FCAKA	0.0000%	0.0000%	X
15	0010250134	electricial box	1	AE212FCAKA	0.0100%	0.0120%	
16	0010150221	subsiduary drain pan	1	AE212FCAKA	0.0000%	0.0000%	X
17	0010150213	drain pan	1	AE212FCAKA	0.0000%	0.0000%	X
18	/	/	/	AE212FCAKA	/	/	/
19	/	/	/	AE212FCAKA	/	/	/

1,The failure rate and the proportion of the spare-part stock are regarded as the reference of the stock for spare-parts;The first time should be stocked accroded with the proportion of the spare-parts,and it should be adjusted with the actual quantity 3 months later.

2,easy-damaged;The spare-part which is often damaged and the customer must stock in the spare-parts warehouse,and should be marked with"*"

3,possible damaged:The spare-part which is not often damaged like the easy damaged one and the customer may stock in the spare-part warehouse accord with the actual case,should be marked with " ".

4,not need provided :The spare-part which is seldom damaged or the maintenance man could not maitmains.The spare parts may be air freighted by the factory if they were damaged.The customer nees not stock in the spare-part warehouse,should be marked with " x ".

5,Above should be improved accord with the reply of the market half a year per time.

6.The spare parts price on net is FOB Qingdao term.

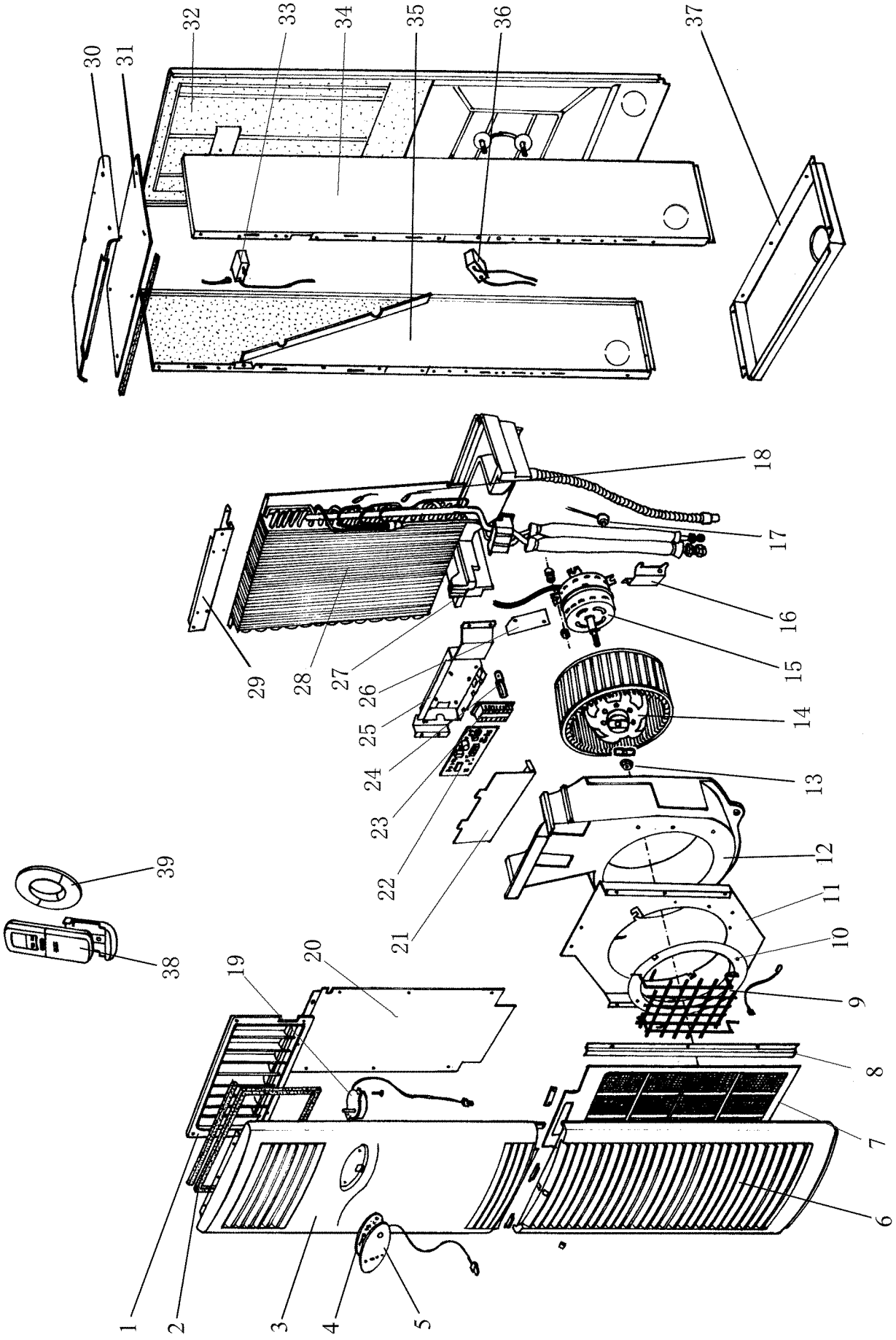
Parts list

No.	Spare parts number	Spare parts description in English	Qty.	Model	Failure rate	the proportion of the spare-part stock	Remark
1	*0010850245.1	fan	2	AE092FCAJA	0.0200%	0.0240%	*
2	*0010850245.2	scroll case	2	AE092FCAJA	0.0000%	0.0000%	X
3	0010450543	fan motor	1	AE092FCAJA	0.0200%	0.0240%	*
4	0010400137	wire remote controller	1	AE092FCAJA	0.0100%	0.0120%	
5	*0010850245.3	evaporator	1	AE092FCAJA	0.0000%	0.0000%	X
6	*0010850245.4	shell	1	AE092FCAJA	0.0000%	0.0000%	X
7	001A3900006	gas pipe temperature sensor	1	AE092FCAJA	0.0100%	0.0120%	
8	001A2500131	PMV	1	AE092FCAJA	0.0100%	0.0120%	
9	*0010850245.5	subsiduary drain pan support bracket	1	AE092FCAJA	0.0100%	0.0120%	
10	*0010850245.6	electricial box support bracket	1	AE092FCAJA	0.0000%	0.0000%	X
11	001A5745116	clip plate	2	AE092FCAJA	0.0000%	0.0000%	X
12	001A4000177	terminal block	1	AE092FCAJA	0.0000%	0.0000%	X
13	0010450254	indoor PCB	1	AE092FCAJA	0.0000%	0.0000%	X
14	001A13011199	electricial box cover	1	AE092FCAJA	0.0100%	0.0120%	
15	0010100417	electricial box	1	AE092FCAJA	0.0200%	0.0240%	*
16	*0010850245.7	subsiduary drain pan	1	AE092FCAJA	0.0000%	0.0000%	X
17	*0010850245.8	drain pan	1	AE092FCAJA	0.0100%	0.0120%	
18	*0010850245.9	outlet airflow flange	1	AE092FCAJA	0.0000%	0.0000%	X
19	*0010850245.10	motor mix ring	1	AE092FCAJA	0.0000%	0.0000%	X
20	0010400158	liquid pipe temperature sensor	1	AE092FCAJA	0.0000%	0.0000%	X
21	0010400159	PMV coil	1	AE092FCAJA	0.0000%	0.0000%	X

Parts list

No.	Spare parts number	Spare parts description in English	Qty.	Model	Failure rate	the proportion of the spare-part stock	Remark
1	*0010850247.1	fan	2	AE182FCAJA	0.0200%	0.0240%	*
2	*0010850247.2	scroll case	2	AE182FCAJA	0.0000%	0.0000%	X
3	0010450546	fan motor	1	AE182FCAJA	0.0200%	0.0240%	*
4	0010400137	wire remote controller	1	AE182FCAJA	0.0100%	0.0120%	
5	*0010850247.3	evaporator	1	AE182FCAJA	0.0000%	0.0000%	X
6	*0010850247.4	shell	1	AE182FCAJA	0.0000%	0.0000%	X
7	001A3900006	gas pipe temperature sensor	1	AE182FCAJA	0.0100%	0.0120%	
8	001A2500131	PMV	1	AE182FCAJA	0.0100%	0.0120%	
9	*0010850247.5	subsiduary drain pan support bracket	1	AE182FCAJA	0.0100%	0.0120%	
10	*0010850247.6	electricial box support bracket	1	AE182FCAJA	0.0000%	0.0000%	X
11	001A5745116	clip plate	2	AE182FCAJA	0.0000%	0.0000%	X
12	001A4000177	terminal block	1	AE182FCAJA	0.0000%	0.0000%	X
13	0010450256	indoor PCB	1	AE182FCAJA	0.0000%	0.0000%	X
14	001A13011199	electricial box cover	1	AE182FCAJA	0.0100%	0.0120%	
15	0010100417	electricial box	1	AE182FCAJA	0.0200%	0.0240%	*
16	*0010850247.7	subsiduary drain pan	1	AE182FCAJA	0.0000%	0.0000%	X
17	*0010850247.8	drain pan	1	AE182FCAJA	0.0100%	0.0120%	
18	*0010850247.9	outlet airflow flange	1	AE182FCAJA	0.0000%	0.0000%	X
19	*0010850247.10	motor mix ring	1	AE182FCAJA	0.0000%	0.0000%	X
20	0010400158	liquid pipe temperature sensor	1	AE182FCAJA	0.0000%	0.0000%	X
21	0010400159	PMV coil	1	AE182FCAJA	0.0000%	0.0000%	X

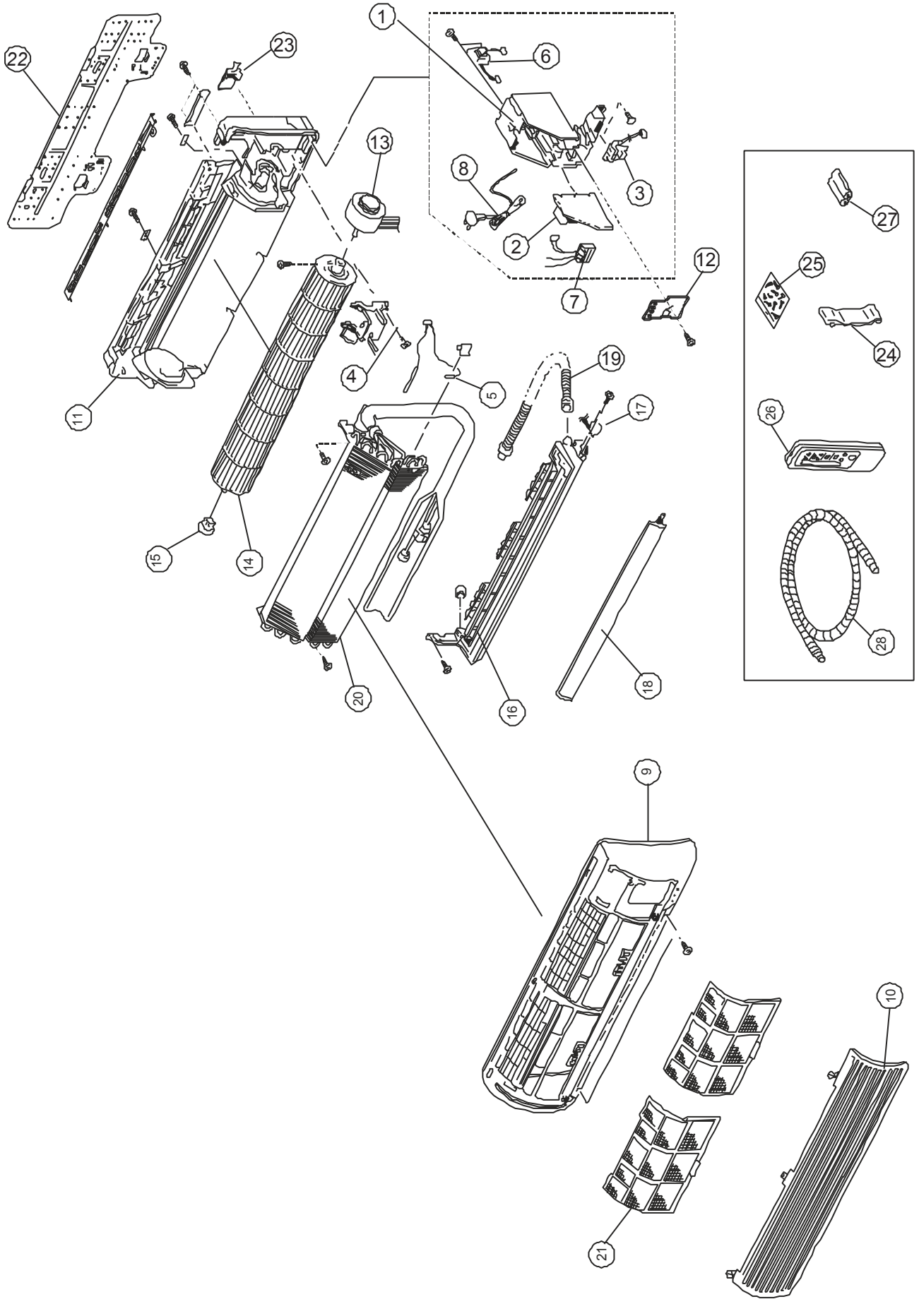
MODEL : AP182FAAHA



AP182FAAHA

No.	Specialized Number	Name	Quantity
1	001A0100247	Vertical blade	1
2	001A1442109A	Prevent burning pad	1
3	001A0100244	Front grill	1
4	001A1237161A	Control board	1
5	001A0600301	Display board	1
6	001A1231111	Inlet grill	1
7	001A2431071	Air-filter	1
8	001A1301061	Right fortified board	1
9	001A1303073A	Guard grill	1
10	001A1301072	Wind ring	1
11	001A1301071A	Cover	1
12	001A1233022	Snail shell	1
13	001A5102008	Nut (M4)	1
14	001A0300016A	Fan	1
15	001A3000039	Motor	1
16	001A1301074A	Press board	1
17	001A3800164	PMV	1
18	001A4400748	Sensor wiring	1
19	001A3000016A	In-phase motor	1
20	001A1101036B	Block board	1
21	001A1301078	Cover of electrical box	1
22	001A0600687	Control base board	1
23	001A4000177	Terminal block(6 bites)	1
24	001A5701062	Suppress wiring nip	1
25	001A0100132B	Electrical box	1
26	001A1301070	Suppress wiring board	1
27	001A0900023	Drainage pan assy	1
28	001A0400206	Heat exchanger assy	1
29	001A1301067	Partition plate	1
30	001A0100248	Top cover assy	1
31	001A1742612A	Top cover pad	1
32	001A0100388	Back guard assy	1
33	001A3600018	Fan motor capacitor	1
34	001A0100250	Right side plate assy	1
35	001A0100249	Left side plate assy	1
36	001A3100085	Negative ion producer	1
37	001A0100081	Bottom plate assy	1
38	001A3400130	Wireless remote controller	1
39	001A1752228A	Guard circle	1

Model: AS062FMAHA AS072FMAHA AS092FMAHA AS122FMAHA



Parts list

No.	Spare parts number	Spare parts description in English	Qty.	Model	Failure rate	the proportion of the spare-part stock	Remark
1	001A1231076	Controller assy	1	AS062FMAHA	0.0100%	0.0120%	
2	001A0600377	PCB(main conrtoller)	1	AS062FMAHA	0.0200%	0.0240%	*
3	001A0600287	PCB(receiver)	1	AS062FMAHA	0.0000%	0.0000%	X
4	001A1431366	motor cover	1	AS062FMAHA	0.0000%	0.0000%	X
5	001A3900059	sensor (pipe temp)	1	AS062FMAHA	0.0100%	0.0120%	
5	001A3800103	sensor (ambient temp)	1	AS062FMAHA	0.0100%	0.0120%	
6	0010400100	Transformer	1	AS062FMAHA	0.0300%	0.0360%	*
7	001A4000159	Terminal block	1	AS062FMAHA	0.0100%	0.0120%	
8	/	/	/	AS062FMAHA	/	/	/
9	001A0100944	Front panel assy	1	AS062FMAHA	0.0000%	0.0000%	X
10	001A0100945	Front grille	1	AS062FMAHA	0.0000%	0.0000%	X
11	001A0100199	Rear case assy	1	AS062FMAHA	0.0000%	0.0000%	X
12	001A1431371	Service cover	1	AS062FMAHA	0.0000%	0.0000%	X
13	001A3000051	motor	1	AS062FMAHA	0.0200%	0.0240%	*
14	001A2300117	Fan	1	AS062FMAHA	0.0200%	0.0240%	*
15	001A0300005	Bearing	1	AS062FMAHA	0.0000%	0.0000%	X
16	001A0900107	Drain pan	1	AS062FMAHA	0.0000%	0.0000%	X
17	001A3000040	Swing motor	1	AS062FMAHA	0.0200%	0.0240%	*
18	001A1232077	Flap	1	AS062FMAHA	0.0000%	0.0000%	X
19	001A0900011	Drain hose	1	AS062FMAHA	0.0000%	0.0000%	X
20	0010750034	evaporator	1	AS062FMAHA	0.0000%	0.0000%	X
21	001A2400058	Air filter	1	AS062FMAHA	0.0000%	0.0000%	X
22	001A1301216	Mounting plate	1	AS062FMAHA	0.0000%	0.0000%	X
23	001A1431368	Piping support	1	AS062FMAHA	0.0000%	0.0000%	X
24	001A1431038	pipe clip	1	AS062FMAHA	0.0000%	0.0000%	X
25	0010600115	screws	1	AS062FMAHA	0.0000%	0.0000%	X
26	0010451255	remote controller	1	AS062FMAHA	0.0000%	0.0000%	X
27	001A4600001	battery	2	AS062FMAHA	0.0000%	0.0000%	X
28	001A1434039	drain pipe	1	AS062FMAHA	0.0000%	0.0000%	X

1,The failer rate and the proportion of the spare-part stock are regarded as the reference of the stock for spare-parts;The first time should be stocked accroded with the proportion of the spare-parts,and it should be adjusted with the actual quantity 3 months later.

2,easy-damaged;The spare-part which is often damaged and the customer must stock in the spare-parts warehouse,and should be marked with"*"

3,possible damaged:The spare-part which is not often damaged like the easy damaged one and the customer may stock in the spare-part warehouse accord with the actual case,should be marked with " ".

4,not need provided :The spare-part which is seldom damaged or the maintenance man could not maitmains.The spare parts may be air freighted by the factory if they were damaged.The customer nees not stock in the spare-part warehouse,should be marked with " x ".

5,Above should be improved accord with the reply of the market half a year per time.

6.The spare parts price on net is FOB Qingdao term.

Parts list

No.	Spare parts number	Spare parts description in English	Qty.	Model	Failure rate	the proportion of the spare-part stock	Remark
1	001A1231076	Controller assy	1	AS072FMAHA	0.0100%	0.0120%	
2	001A0600377	PCB(main conrtoller)	1	AS072FMAHA	0.0200%	0.0240%	*
3	001A0600287	PCB(receiver)	1	AS072FMAHA	0.0000%	0.0000%	X
4	001A1431366	motor cover	1	AS072FMAHA	0.0000%	0.0000%	X
5	001A3900059	sensor (pipe temp)	1	AS072FMAHA	0.0100%	0.0120%	
5	001A3800103	sensor (ambient temp)	1	AS072FMAHA	0.0100%	0.0120%	
6	0010400100	Transformer	1	AS072FMAHA	0.0300%	0.0360%	*
7	001A4000159	Terminal block	1	AS072FMAHA	0.0100%	0.0120%	
8	/	/	/	AS072FMAHA	/	/	/
9	0010251160	Front panel assy	1	AS072FMAHA	0.0000%	0.0000%	X
10	0010251159	Front grille	1	AS072FMAHA	0.0000%	0.0000%	X
11	001A0100199	Rear case assy	1	AS072FMAHA	0.0000%	0.0000%	X
12	001A1431371	Service cover	1	AS072FMAHA	0.0000%	0.0000%	X
13	001A3000051	motor	1	AS072FMAHA	0.0200%	0.0240%	*
14	001A2300117	Fan	1	AS072FMAHA	0.0200%	0.0240%	*
15	001A0300005	Bearing	1	AS072FMAHA	0.0000%	0.0000%	X
16	001A0900107	Drain pan	1	AS072FMAHA	0.0000%	0.0000%	X
17	001A3000040	Swing motor	1	AS072FMAHA	0.0200%	0.0240%	*
18	001A1232077	Flap	1	AS072FMAHA	0.0000%	0.0000%	X
19	001A0900011	Drain hose	1	AS072FMAHA	0.0000%	0.0000%	X
20	0010750035	evaporator	1	AS072FMAHA	0.0000%	0.0000%	X
21	001A2400058	Air filter	1	AS072FMAHA	0.0000%	0.0000%	X
22	001A1301216	Mounting plate	1	AS072FMAHA	0.0000%	0.0000%	X
23	001A1431368	Piping support	1	AS072FMAHA	0.0000%	0.0000%	X
24	001A1431038	pipe clip	1	AS072FMAHA	0.0000%	0.0000%	X
25	0010600115	screws	1	AS072FMAHA	0.0000%	0.0000%	X
26	0010451255	remote controller	1	AS072FMAHA	0.0000%	0.0000%	X
27	001A4600001	battery	2	AS072FMAHA	0.0000%	0.0000%	X
28	001A1434039	drain pipe	1	AS072FMAHA	0.0000%	0.0000%	X

1,The failure rate and the proportion of the spare-part stock are regarded as the reference of the stock for spare-parts;The first time should be stocked accroded with the proportion of the spare-parts,and it should be adjusted with the actual quantity 3 months later.

2,easy-damaged;The spare-part which is often damaged and the customer must stock in the spare-parts warehouse,and should be marked with"*"

3,possible damaged:The spare-part which is not often damaged like the easy damaged one and the customer may stock in the spare-part warehouse accord with the actual case,should be marked with " ".

4,not need provided :The spare-part which is seldom damaged or the maintenance man could not maitmains.The spare parts may be air freighted by the factory if they were damaged.The customer nees not stock in the spare-part warehouse,should be marked with " x ".

5,Above should be improved accord with the reply of the market half a year per time.

6.The spare parts price on net is FOB Qingdao term.

Parts list

No.	Spare parts number	Spare parts description in English	Qty.	Model	Failure rate	the proportion of the spare-part stock	Remark
1	001A1231081	Controller assy	1	AS092FMAHA	0.0100%	0.0120%	
2	001A0600377	PCB(main conrtoller)	1	AS092FMAHA	0.0200%	0.0240%	*
3	001A0600287	PCB(receiver)	1	AS092FMAHA	0.0000%	0.0000%	X
4	001A1431371	motor cover	1	AS092FMAHA	0.0000%	0.0000%	X
5	001A3900059	sensor (pipe temp)	1	AS092FMAHA	0.0100%	0.0120%	
5	001A4400469X4	sensor (ambient temp)	1	AS092FMAHA	0.0100%	0.0120%	
6	0010400100	Transformer	1	AS092FMAHA	0.0300%	0.0360%	*
7	001A4000159	Terminal block	1	AS092FMAHA	0.0100%	0.0120%	
8	/	/	/	AS092FMAHA	/	/	/
9	0010251160	Front panel assy	1	AS092FMAHA	0.0000%	0.0000%	X
10	0010251159	Front grille	1	AS092FMAHA	0.0000%	0.0000%	X
11	001A0100206	Rear case assy	1	AS092FMAHA	0.0000%	0.0000%	X
12	001A1431371	Service cover	1	AS092FMAHA	0.0000%	0.0000%	X
13	001A3000052	motor	1	AS092FMAHA	0.0200%	0.0240%	*
14	001A2335028	Fan	1	AS092FMAHA	0.0200%	0.0240%	*
15	001A0300005	Bearing	1	AS092FMAHA	0.0000%	0.0000%	X
16	001A0900107	Drain pan	1	AS092FMAHA	0.0000%	0.0000%	X
17	001A3000040	Swing motor	1	AS092FMAHA	0.0200%	0.0240%	*
18	001A1232077	Flap	1	AS092FMAHA	0.0000%	0.0000%	X
19	001A0900011	Drain hose	1	AS092FMAHA	0.0000%	0.0000%	X
20	001A0400140	evaporator	1	AS092FMAHA	0.0000%	0.0000%	X
21	001A2400060	Air filter (left)	1	AS092FMAHA	0.0000%	0.0000%	X
21	001A2400061	Air filter (right)	1	AS092FMAHA	0.0000%	0.0000%	X
22	001A1301216	Mounting plate	1	AS092FMAHA	0.0000%	0.0000%	X
23	001A1431368	Piping support	1	AS092FMAHA	0.0000%	0.0000%	X
24	001A1431038	pipe clip	1	AS092FMAHA	0.0000%	0.0000%	X
25	001A0900060	screws	1	AS092FMAHA	0.0000%	0.0000%	X
26	0010451255	remote controller	1	AS092FMAHA	0.0000%	0.0000%	X
27	001A4600001	battery	2	AS092FMAHA	0.0000%	0.0000%	X
28	001A1434039	drain pipe	1	AS092FMAHA	0.0000%	0.0000%	X

1,The failer rate and the proportion of the spare-part stock are regarded as the reference of the stock for spare-parts;The first time should be stocked accroded with the proportion of the spare-parts,and it should be adjusted with the actual quantity 3 months later.

2,easy-damaged;The spare-part which is often damaged and the customer must stock in the spare-parts warehouse,and should be marked with"*"

3,possible damaged:The spare-part which is not often damaged like the easy damaged one and the customer may stock in the spare-part warehouse accord with the actual case,should be marked with " ".

4,not need provided :The spare-part which is seldom damaged or the maintenance man could not maitmains.The spare parts may be air freighted by the factory if they were damaged.The customer nees not stock in the spare-part warehouse,should be marked with " x ".

5,Above should be improved accord with the reply of the market half a year per time.

6.The spare parts price on net is FOB Qingdao term.

Parts list

No.	Spare parts number	Spare parts description in English	Qty.	Model	Failure rate	the proportion of the spare-part stock	Remark
1	001A1431693	Controller assy	1	AS122FMAHA	0.0100%	0.0120%	
2	0010400581	PCB(main conrtoller)	1	AS122FMAHA	0.0200%	0.0240%	*
3	001A0600287	PCB(receiver)	1	AS122FMAHA	0.0000%	0.0000%	X
4	001A1431494	motor cover	1	AS122FMAHA	0.0000%	0.0000%	X
5	001A3900059	sensor (pipe temp)	1	AS122FMAHA	0.0100%	0.0120%	
5	001A3800103	sensor (ambient temp)	1	AS122FMAHA	0.0100%	0.0120%	
6	001A3800002	Transformer	1	AS122FMAHA	0.0300%	0.0360%	*
7	0010400583	Terminal block	1	AS122FMAHA	0.0100%	0.0120%	
8	/	/	/	AS122FMAHA	/	/	/
9	0010251162	Front panel assy	1	AS122FMAHA	0.0000%	0.0000%	X
10	0010251161	Front grille	1	AS122FMAHA	0.0000%	0.0000%	X
11	001A0100276	Rear case assy	1	AS122FMAHA	0.0000%	0.0000%	X
12	001A1431494	Service cover	1	AS122FMAHA	0.0000%	0.0000%	X
13	001A3000088	motor	1	AS122FMAHA	0.0200%	0.0240%	*
14	001A0300038A	Fan	1	AS122FMAHA	0.0200%	0.0240%	*
15	001A0300005	Bearing	1	AS122FMAHA	0.0000%	0.0000%	X
16	001A0900104	Drain pan	1	AS122FMAHA	0.0000%	0.0000%	X
17	001A3000040	Swing motor	1	AS122FMAHA	0.0200%	0.0240%	*
18	001A1231140	Flap (upper)	1	AS122FMAHA	0.0000%	0.0000%	X
18	001A1231139	Flap (lower)	1	AS122FMAHA	0.0000%	0.0000%	X
19	001A0900011	Drain hose	1	AS122FMAHA	0.0000%	0.0000%	X
20	001A0400129	evaporator	1	AS122FMAHA	0.0000%	0.0000%	X
21	001A2400080	Air filter	1	AS122FMAHA	0.0000%	0.0000%	X
22	001A1301216	Mounting plate	1	AS122FMAHA	0.0000%	0.0000%	X
23	001A1431368	Piping support	1	AS122FMAHA	0.0000%	0.0000%	X
24	001A1431038	pipe clip	1	AS122FMAHA	0.0000%	0.0000%	X
25	0010600116	screws	1	AS122FMAHA	0.0000%	0.0000%	X
26	0010451255	remote controller	1	AS122FMAHA	0.0000%	0.0000%	X
27	001A4600001	battery	2	AS122FMAHA	0.0000%	0.0000%	X
28	001A1434039	drain pipe	1	AS122FMAHA	0.0000%	0.0000%	X

1,The failer rate and the proportion of the spare-part stock are regarded as the reference of the stock for spare-parts;The first time should be stocked accroded with the proportion of the spare-parts,and it should be adjusted with the actual quantity 3 months later.

2,easy-damaged;The spare-part which is often damaged and the customer must stock in the spare-parts warehouse,and should be marked with"*"

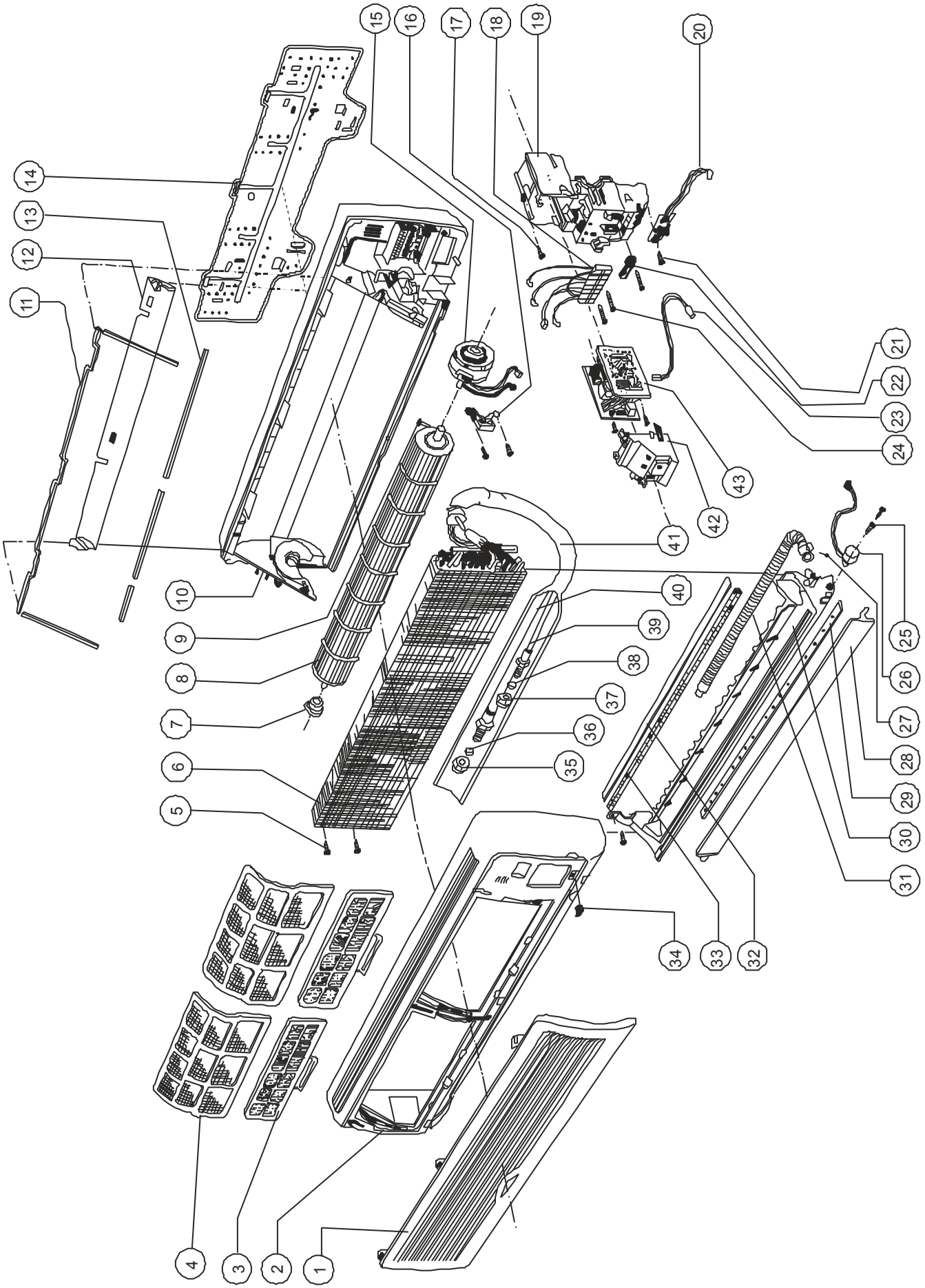
3,possible damaged:The spare-part which is not often damaged like the easy damaged one and the customer may stock in the spare-part warehouse accord with the actual case,should be marked with " ".

4,not need provided :The spare-part which is seldom damaged or the maintenance man could not maitmains.The spare parts may be air freighted by the factory if they were damaged.The customer nees not stock in the spare-part warehouse,should be marked with " x ".

5,Above should be improved accord with the reply of the market half a year per time.

6.The spare parts price on net is FOB Qingdao term.

Model: AS182FTAHA



Parts list

No.	Spare parts number	Spare parts description in English	Qty.	Model	Failure rate	the proportion of the spare-part stock	Remark
1	001A1231127	Front grille	1	AS182FTAHA	0.0000%	0.0000%	X
2	001A1232119	Front panel	1	AS182FTAHA	0.0000%	0.0000%	X
3	/	/	/	AS182FTAHA	/	/	/
4	001A2400076	Air filter	2	AS182FTAHA	0.0000%	0.0000%	X
5	001A5002070	screw	2	AS182FTAHA	0.0000%	0.0000%	X
6	001A0400065	Heat exchanger	1	AS182FTAHA	0.0100%	0.0120%	
7	001A0300036	bearing	1	AS182FTAHA	0.0000%	0.0000%	X
8	001A2300034	Fan	1	AS182FTAHA	0.0200%	0.0240%	
9	001A5002021	screw	1	AS182FTAHA	0.0000%	0.0000%	X
10	001A1232116	Bottom plate	1	AS182FTAHA	0.0000%	0.0000%	X
11	001A1734630	cushion	1	AS182FTAHA	0.0000%	0.0000%	X
12	001A1733639	cushion	1	AS182FTAHA	0.0000%	0.0000%	X
13	001A1734627	cushion	1	AS182FTAHA	0.0000%	0.0000%	X
14	001A1101075	mounting plate	1	AS182FTAHA	0.0000%	0.0000%	X
15	001A3000050	motor	1	AS182FTAHA	0.0200%	0.0240%	*
16	001A1431453	motor cover	1	AS182FTAHA	0.0000%	0.0000%	X
17	001A5002114	screw	1	AS182FTAHA	0.0000%	0.0000%	X
18	0010400578	Terminal block	1	AS182FTAHA	0.0100%	0.0120%	
19	001A1231123	control box	1	AS182FTAHA	0.0100%	0.0120%	
21	001A5002116	screw	1	AS182FTAHA	0.0000%	0.0000%	X
22	001A1231124	wiring clamp	1	AS182FTAHA	0.0000%	0.0000%	X
23	001A3900004	temperature sensor	1	AS182FTAHA	0.0100%	0.0120%	
24	001A5002070	screw	1	AS182FTAHA	0.0000%	0.0000%	X
25	001A5002026	screw	1	AS182FTAHA	0.0000%	0.0000%	X
26	001A3000071	swing motor	1	AS182FTAHA	0.0200%	0.0240%	*
27	001A5002030	screw	1	AS182FTAHA	0.0000%	0.0000%	X
28	001A1231126	Flap	1	AS182FTAHA	0.0000%	0.0000%	X
29	001A1734635	cushion	1	AS182FTAHA	0.0000%	0.0000%	X
30	001A1231115	drain pain	1	AS182FTAHA	0.0000%	0.0000%	X
31	001A0900049	drain hose	1	AS182FTAHA	0.0000%	0.0000%	X
32	001A1733647	cushion	1	AS182FTAHA	0.0000%	0.0000%	X
33	001A1733632	cushion	1	AS182FTAHA	0.0000%	0.0000%	X
34	001A1443459	button	1	AS182FTAHA	0.0000%	0.0000%	X
35	0010600150	Nut	1	AS182FTAHA	0.0000%	0.0000%	X
36	001A2912001	dustproof cover	1	AS182FTAHA	0.0000%	0.0000%	X
37	0010600148	Nut	1	AS182FTAHA	0.0000%	0.0000%	X
38	001A2912002	dustproof cover	1	AS182FTAHA	0.0000%	0.0000%	X
39	001B0500794	suction pipe assy	1	AS182FTAHA	0.0000%	0.0000%	X
40	001B0500795	discharge pipe assy	1	AS182FTAHA	0.0000%	0.0000%	X
41	001A1741744	Heat insulation tube	1	AS182FTAHA	0.0000%	0.0000%	X
42	001A1231125	Service cover	1	AS182FTAHA	0.0000%	0.0000%	X
43	0010400577	PC board	1	AS182FTAHA	0.0200%	0.0240%	*

1,The failure rate and the proportion of the spare-part stock are regarded as the reference of the stock for spare-parts;The first time should be stocked accroded with the proportion of the spare-parts,and it should be adjusted with the actual quantity 3 months later.

2,easy-damaged;The spare-part which is often damaged and the customer must stock in the spare-parts warehouse,and should be marked with"*"

3,possible damaged:The spare-part which is not often damaged like the easy damaged one and the customer may stock in the spare-part warehouse accord with the actual case,should be marked with " ".

4,not need provided :The spare-part which is seldom damaged or the maintenance man could not maitmains.The spare parts may be air freighted by the factory if they were damaged.The customer nees not stock in the spare-part warehouse,should be marked with " x ".

5,Above should be improved accord with the reply of the market half a year per time.

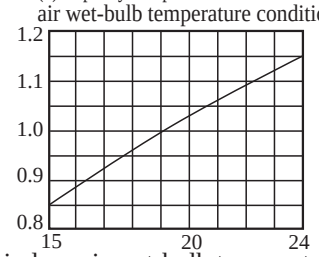
6.The spare parts price on net is FOB Qingdao term.

AU48- Characteristics of refrigerating and heating capacity

1) Calculation method

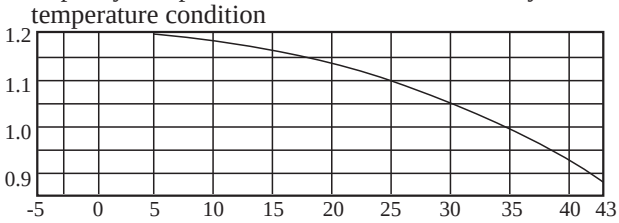
Calculation method of refrigerating capacity-Refrigerating capacity to be known = Refrigerating capacity x (1) x (2) x (3) x (4) x (5) W

(1) Capacity compensation value of indoor air wet-bulb temperature condition



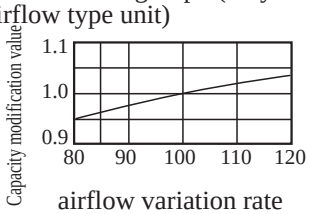
indoor air wet-bulb temperature(*)

Capacity compensation value of outdoor air dry-bulb temperature condition



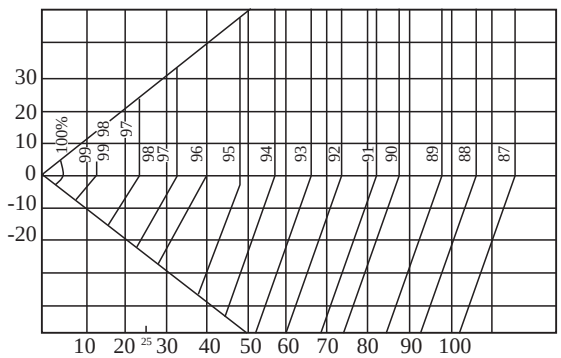
outdoor air dry-bulb temperature(*)

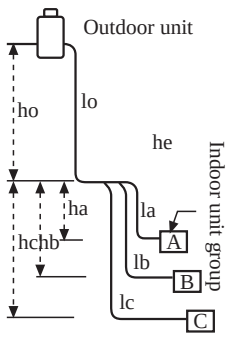
(3) Capacity modification value under airflow variation rate of indoor unit group (only for airflow type unit)



airflow variation rate

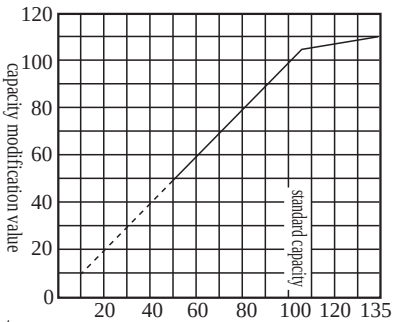
(4) Fall of refrigerant pipe of indoor and outdoor unit, capacity compensation value of pipe length





L(m) Length of refrigerant pipe (corresponding length) L (m)

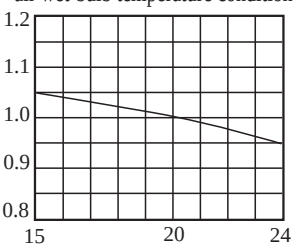
(5) Capacity compensation suitable for total capability of indoor unit group (cooling)



Total capacity of indoor unit group

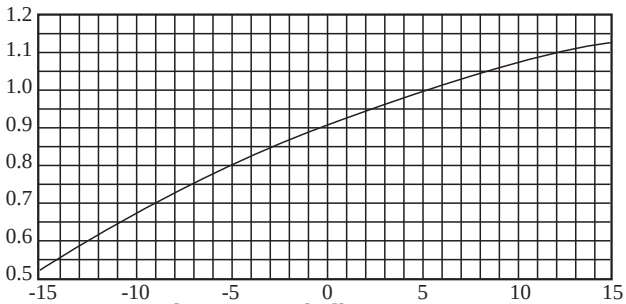
2) Calculation method of heating capacity—Heating capacity to be known = Heating capacity ((1) x (2) x (3) x (4) x (5) x (6)) W

(1) Capacity modification under indoor air wet-bulb temperature condition



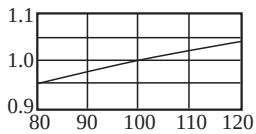
indoor air dry-bulb temperature(*)

(2) Capacity modification under outdoor air wet-bulb temperature condition

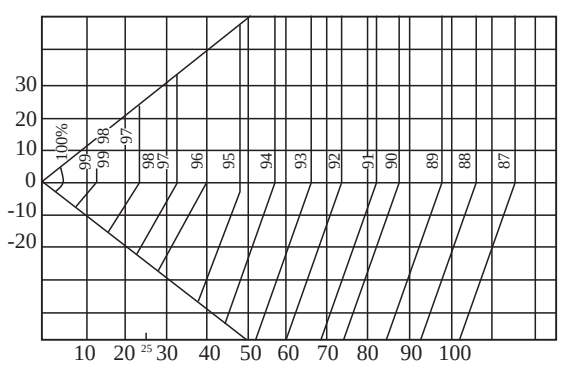


outdoor air wet-bulb temperature(*)

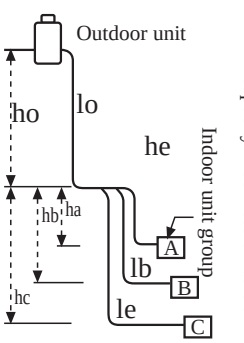
(3) Capacity modification value under airflow variation rate of indoor unit group



(4) Fall of refrigerant pipe of indoor and outdoor unit, capacity compensation value of pipe length

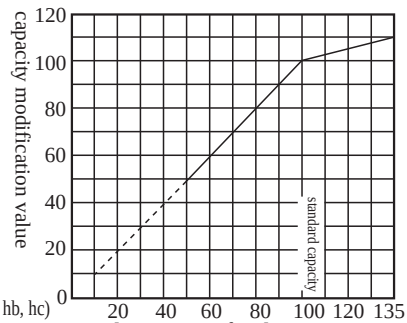


Length of refrigerant pipe (corresponding length) L (m)



H=ho+(the max. value of ha, hb, hc)
L=lo+(the max. value of la, lb, lc)

(5) Capacity compensation suitable for total capability of indoor unit group (heating)



Total capacity of indoor unit group